UNIVERSITY ADMINISTRATION

CHARLES W. ELIOT

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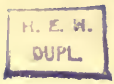

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UNIVERSITY ADMINISTRATION

BY

CHARLES W. ELIOT

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UNIVERSITY ADMINISTRATION

I

UNIVERSITY TRUSTEES

The principal governing board of an American university is most commonly called the trustees or the regents. In endowed institutions the members of the board usually serve for life; but in State and city institutions they ordinarily serve for a limited term of years, being reëligible term after term. The number of members in such boards varies very much, being sometimes as small as seven or nine, and often as large as twenty to forty, and even larger. The endowed institutions have a decided advantage over the institutions supported by taxation, in that they can select comparatively young men as trustees, and get from them a long service; and they are also free, as regards the choice of trustees, from the political, commercial, or class influences

which sometimes control the choice of trustees or regents in institutions maintained from public revenues. In the American State and city universities and colleges the objectionable political influences have diminished with time; but class influences such as that exerted by farmers as a class, or trade-unionists as a class, are still apt to prove potent.

The kind of man needed in the governing board of a university is the highly educated, public-spirited, business or professional man, who takes a strong interest in educational and social problems, and believes in the higher education as the source of enlightenment and progress for all stages of education, and for all the industrial and social interests of the community. He should also be a man who has been successful in his own calling, and commands the confidence of all who know him. The faculty he will most need is good judgment; for he will often be called upon to decide on matters which lie beyond the scope of his own experience, and about which he must, therefore, get his facts through others, and

his opinions through a process of comparison and judicious shifting.

The best number of members for a university's principal governing board is seven; because that number of men can sit round a small table, talk with each other informally without waste of words or any display or pretence, provide an adequate diversity of points of view and modes of dealing with the subject in hand, and yet be prompt and efficient in the despatch of business. In a board of seven the different professions and callings can be sufficiently represented.

In State institutions it has been the practice to put into the governing board of the State university a considerable number of ex-officio members; as, for instance, the Governor, the Chief Justice, and the Secretary of the State Board of Agriculture, — following in this respect the early example of Harvard College, whose first governing board, established in 1642, contained the Governor and Deputy Governor, the Magistrates of the Jurisdiction, together with the teaching elders of the six

next adjoining towns. In an infant colony or state this method is a natural one; but in an adult community, ex-officio members are ordinarily undesirable, because they are inevitably men fully occupied with other affairs, who were selected for skill in those other affairs, and not because of their fitness to govern a university. If, however, the trustees are a numerous board, meeting but seldom, and intrusting the real work to a few selected members, the ex-officio members may be as good figure-heads as the community can supply.

It might be supposed that the ordinary life-service on boards of trustees of endowed institutions would result in boards composed of old men; but this undesirable result will not occur if pains be taken to fill each successive vacancy in the board from a generation younger than that to which most of the surviving members belong. There is a natural tendency in any such coöptative board to fill a vacancy by electing some contemporary of the remaining members; but this tendency should invariably be resisted.

The average length of service of members of such boards is by no means so long as is usually supposed. A few men serve for long terms; a few others serve for short terms; but the main body of members, during fifty or a hundred years, will have a length of service which can fairly be called moderate. Thus between 1792 and 1893 thirty-seven men served as Fellows in Harvard's principal governing board, called the President and Fellows of Harvard College; and the average term of service of these thirty-seven men was eleven and seven-tenths years. It should be said, however, first, that to serve on this board has always been considered a high honor in Massachusetts; and secondly, that the service is decidedly exacting, claiming the entire attention of the members during about four morning hours once a fortnight, except during the summer vacation, and entailing a variety of work on committees in addition.

When a board of trustees is large, and the residences of its members are scattered over a wide area, the meetings of the board are sure

to be infrequent, and its business has to be delegated to an executive or prudential committee. The board itself then becomes a sort of confirming or consenting board, and in some cases a court of appeal, its real work from week to week being done by a small committee which can easily come together for consultation and action. Any board for which a membership of national range is desired will turn out to be of this nature, as, for example, the regents of the Smithsonian Institution and the trustees of the Carnegie Foundation. It is a curious and interesting fact that the university with the most fortunate organization in the country is the oldest university, its principal governing board, the President and Fellows of Harvard College, consisting of seven men, who still act under the Charter of 1650, in which no line or word has ever been changed.

The functions of the board of trustees or regents of an American university are of fundamental importance. They relate to the man-

agement of the property both real and personal; to the distribution of the annual income of the university among the different departments of instruction and research; to the appointment of all officers and teachers in the university; to salaries and retiring allowances; and to the enactment of the rules or statutes under which the regular work of the university proceeds. The board also passes finally on all the educational policies of the university; but in this function it ordinarily follows the advice of the university faculties, or of committees to which faculties have delegated their authority on certain subjects.

In the endowed institutions the care of the property of the university takes much of the time of the trustees. A salaried treasurer is responsible for all administrative details, and for the suggestion of new investments and changes of investments. He needs the aid of a small finance committee; and consequently, in the choice of trustees, attention should be given to providing the treasurer with a small number of competent and easily accessible

advisers. Experienced boards follow a few plain rules with regard to their investments. The first rule is to use an adequate variety of sound investments, such as mortgages, business notes, — especially notes of corporations, — railroad stocks and bonds, bonds of public-utilities companies, — such as street railways, telegraph and telephone companies, and light, heat, and power companies, — real estate trust stocks, and real estate. Some endowed universities have profited greatly by real estate investments in rapidly growing towns and cities; but others have found urban real estate investments to be not only troublesome but insecure, and fluctuating as to the amount of their income. The insecurity results from the sudden and unforeseen migrations of population and trades which have occurred in many American cities. As to agricultural holdings, they are in most communities too insecure for university investments, as English Cambridge and Oxford learnt to their dismay in the last third of the nineteenth century. Under the tax laws of some States, mortgages, which

were formerly a favorite form of investment for universities, as for other trusts, have ceased to be desirable. A conservative board inevitably tends to make local investments, because local investments can be more easily investigated at the beginning, and watched as the years go by. Nevertheless, a prudent board of university trustees will endeavor to keep the range of its investments wide; so that the university may not suffer deeply when some one section of the country becomes unprosperous, or some one industry ceases to be profitable. Railroad stocks and bonds have been favorite university investments of late years, partly on account of their convenience and easy negotiability, but partly also because their ultimate security rests on the success of an immense variety of industries and productive activities all over the country. It is a striking fact that university investments in our days, with the exception of real estate and mortgages, are made chiefly in forms of property which had no existence seventy years ago.

University trustees naturally prefer that funds given them for specific objects should not be invested in specified securities, but should be merged with the general investments of the institution, the average income on the general investments being credited to each separate fund and applied to its specific object. In this way the mass of the general investments insures the capital of each fund and the perpetual accomplishment of its specific object. The benefactor who does not prefer this method has either a speculative turn as regards investments, or a remarkable confidence in his own judgment concerning to-day's investments, combined with a willingness to trust for the perpetuity of his endowment to the sagacity the trustees will exhibit from generation to generation in reinvesting his fund. Since, however, benefactors appear from time to time who prefer the chances of higher income for their funds and of profits on changes of the funds' securities to a more moderate but assured income, the trustees must be prepared to accept gifts which are

to be specially invested. The trustees may also have reasons of their own for temporarily holding a gift in the particular securities in which it was turned over to them. The securities may not be salable at the moment on advantageous terms, and yet be good enough to hold for the object of the gift.

Next to the exercise of good judgment in making sound investments of the university property, comes the discretion of the trustees in expending the university income. There are certain fundamental questions concerning university expenditure which the trustees, or some committee acting for the trustees, must settle. What proportion of the university income shall be devoted to salaries, and what proportion to expenses, — such as light, heat, cleaning, maintenance of buildings, services and wages, apparatus, and the care of grounds? The large part of a university's income which must go to other objects than salaries is often a disagreeable surprise for inexperienced trustees. Of late years this proportion devoted to general expenses has been

increasing, on account of the increased provision of apparatus and other supplies, and the rising cost of the maintenance of buildings and of the mechanical equipment. The establishment of a wise scale of salaries is another very important duty of the board of trustees. Since the physical surroundings and social conditions of the American universities differ greatly, widely different scales of salaries exist in them, and these differences seem likely to be permanent. Each institution, therefore, must study out for itself that scale of salaries which best suits its special needs and circumstances, and this study and the responsibility for ultimate action belong to the board of trustees.

The general features of a good scale of salaries are as follows: The salary of an annual appointee at the start should be low,—about the amount needed by a young unmarried man for comfortable support in the university's city or village. When, after a few years, this young man receives an appointment without limit of time, a somewhat higher

salary should be given him, with a small advance each year for, say, three years. If this instructor so commends himself that the university desires his further service, he should receive, as assistant professor, a salary which will enable him to support a wife and two or three children comfortably, but without luxury or costly pleasures. It is well to have the appointment of assistant professor given for a fixed term of years, as, for example, five. If, at the end of his first term as assistant professor, a second appointment with the same title be given, a moderate advance of salary should accompany the second appointment. By the time the end of a second term as assistant professor is reached, the candidate for further employment in the university will be approaching forty years of age, and is ready for a full professorship. On promotion to this life-office, another advance of salary should be given, so that the salary of the full professor may easily be four times the sum which the young man received at his first annual appointment. The salary of a full professor

should then rise by moderate steps—say once in five years—until the maximum is reached, the maximum being ordinarily attained between fifty and fifty-five years of age, unless in the cases of men who demonstrate their fitness for a professorship earlier in life, and have the chance to fill some vacancy or new post. This scale of salaries is arranged for persons who begin at the bottom, and rise through all the stages to the top of university employ. When men of ability, proved elsewhere, are taken into the university's service, a position on the scale must be assigned to them by the trustees, who will naturally be guided by the extent of their experience and services elsewhere, their desirableness, and the inducements other than salary which are likely to influence them. To fix this scale of salaries, and to modify it from time to time, according to changing social conditions, and the general scale of living in the community which surrounds the university, is one of the most important duties of trustees, and one of the most difficult.

In a large university there will always be numerous administrative officers besides the teachers. The salaries of these administrative officers can be, for the most part, assimilated according to their age and academic standing to those of teachers; but in general the administrative posts in a university are less attractive than the teaching posts, because they do not offer the satisfaction of literary or scientific attainment, the long, uninterrupted vacations which teachers enjoy, or the pleasure of intimate, helpful intercourse with a stream of young men of high intellectual ambition. Accordingly, salaries for able and altruistic young men ought to be somewhat higher in administrative posts than they are for men of corresponding age and merit in teaching posts.

A prudent and far-seeing board of trustees will make sure that a system of retiring allowances or pensions is provided for all the teachers and administrative officers that they employ. This provision is needed to attract the right sort of man to university work, to

make promotion more rapid than it would otherwise be, and to keep the university staff fresh and efficient. It is not an extravagant or luxurious provision, but a true economy. So far as the endowed universities are concerned, the Carnegie Foundation has in large measure relieved trustees of this function.

In the endowed institutions which depend in part on tuition-fees, the trustees have a difficult function in determining what tuition-fees may safely be charged, without reducing the number of students, or impairing their quality by excluding the able and ambitious sons of families whose income is small. Experience has taught that well-conducted universities, in which a moderate number of scholarships and fellowships are accessible to promising young men, and a variety of remunerative employments can be offered to students for a part of their time, can be successfully maintained, and, indeed, rapidly enlarged, although they charge considerable tuition-fees, and are all the time in competition with universities which charge nothing, or but little, for

tuition. To accomplish this end, however, requires prudence and good judgment on the part of the trustees, together with a broad outlook on the general conditions of American society.

Every university board of trustees has to study carefully the means of enlarging the resources of the university. An endowed university needs a stream of new gifts, in order to enable it to maintain its old departments, and provide the new ones which the social and industrial changes in the community at large make desirable, or, indeed, indispensable. The most effectual means of procuring new gifts is to demonstrate that all previous gifts have been used with consideration for the givers' wishes, with safety as regards the permanence of the trusts, and with discretion as regards their steady usefulness. The winning of new endowments depends on widespread confidence in the wisdom and success with which the trustees have used their existing endowments. To this end any experienced and successful board of trustees will make the

most complete publication possible of their annual accounts and of the state of their property. They will also secure in some way the public announcement of the pressing needs of the university in the immediate future.

In a State university the function of the board of trustees or regents in this respect is similar to, but not identical with, that in an endowed. There is the same need of the utmost publicity with regard to all the financial doings of the board and the condition of the property; but their attention needs to be directed chiefly to convincing the people of the State, and particularly the members of the legislature, first, of the usefulness of their university; secondly, of its merits and defects in comparison with the universities of other States; and thirdly, of its urgent needs. As in the case of the endowed institutions, the trustees or regents will need to use all means of spreading among educated people throughout the State a knowledge, not only of the actual condition of the university, but of its potency and promise. If the industries of the State are

developed in any particular direction, as, for example, towards mining, or agriculture, or forestry, or manufacturing, the university trustees will naturally endeavor to serve conspicuously the special industry of the State; because a popular interest in the university thus aroused can be depended on to promote enlargements in many other directions. The experience of such universities as those of Michigan, Wisconsin, Minnesota, Illinois, Missouri, Kansas, and California, illustrates amply all phases of this important function of university trustees in increasing university resources.

It is the duty of the trustees of a college or university to promote in every possible way the interests of the municipality in which the institution is situated. As a rule, whatever helps the college or university will help the municipality, and whatever improves the municipality as a place of residence will help the college or university. It has been abundantly proved that the presence of exempted institutions in any municipality is a clear advantage to that municipality, especially if the institu-

tions maintain open grounds and erect interesting buildings. Indeed, exempted areas, if they possess natural or artificial beauty, and are kept in good order, are always a pecuniary advantage to a municipality, whether they belong to the town or city, or to exempted institutions within its limits. Since, however, it is the duty of university trustees to see to it that safe and convenient lodgings are accessible to their students, and that wholesome food can be obtained at low prices, it is possible for trustees, who attend to their duties in these respects, to interfere somewhat with the business of those residents of the municipality who let rooms to students, or feed them. University trustees may reasonably regard it as their duty also to see to it that all the supplies which students need, such as books, stationery, clothing, and furniture, are brought within the reach of students at moderate prices through the agency of a coöperative society; and if such a society be established with the assistance of the trustees, it will interfere somewhat with the business of local

dealers in such supplies. A due regard to the welfare of the students and the institution makes it impossible for careful and judicious trustees to leave the prices of the things which all students — rich and poor alike — must buy to be determined by competition between private persons only, particularly at an institution at which the number of students is increasing with some rapidity. Unless a university be willing to take its students only from well-to-do families, it must see to it that lodgings, food, fuel, and indispensable supplies are accessible to students at moderate prices. Moreover, halls of chambers and large dining-halls increase not only the enjoyments of student-life, but also its ethical and democratic influences. To overcome this inevitable difficulty in its relations to the municipality in which it is situated, a college or university should be careful to offer facilities and gratifications to the residents of the place, such as interesting lectures open to the public, and museums of art, history, and archæology, to keep the view of its grounds open from the

outside, and to give the use of its halls and grounds to the town or city on festival occasions. A college or university may also reasonably contribute to the construction of good roads on the borders of its estate, and of any sewers of which it makes large use.

It is an imperative duty of university trustees to take all possible measures for promoting the health and bodily vigor of the students under their charge. These measures include a safe water-supply, adequate warmth and ventilation in university buildings, good play-grounds and other means of exercise, an infirmary or hospital for the treatment of injuries and of contagious and non-contagious diseases, and a system of medical inspection and free medical examination for students. It is nowadays quite possible, through foresight and adequate expenditure for the means of immediate isolation and treatment, to reduce very much the chance of epidemics, even among young men who live together in such intimate contact as obtains at a college or university. It is for the board of trustees to de-

vise and provide all such means of combating disease. It is for them to adopt all measures which preventive medicine has proved to be useful, and thereby reduce to lowest terms not only the death rate among students, but also the losses of study-time through sickness.

A difficult function for university trustees is the provident care of the university estate, including the selection of designs for buildings, the determination of the grouping of buildings, the laying-out and decoration of the university's occupied grounds, and the provision of an amount of land sufficient for future needs. To secure by gift or purchase adequate space for the buildings of the present and in good part for those of the future is a primary duty. The beauty of university buildings, of their site, and of the grounds about them, makes an important part of its teaching. On this account urban universities whose buildings are situated in compactly built streets can never exert on their students all the beneficial influences which suburban or rural universities can exert. Every large

university should own and maintain in good order decorated open spaces about its buildings, interior quadrangles between groups of buildings, gardens, and groves. Shabbiness and untidiness should never be permitted on university grounds. If the site provides wide prospects or beautiful vistas, these landscape beauties should be carefully utilized, and preserved from impairment by the growing up of trees, or the planting of buildings across the lines of view. In order to discharge well this function of university trustees, the board should obtain the best professional advice which the country affords, and is never justified in employing for local or political reasons, or in deference to the wishes of benefactors, any advisers about the designs of buildings, their sites, and the lay-out of grounds, who are not of the first class. In accepting the gift of a building, prudent trustees will always make the condition that the design and site of the building shall be acceptable to the expert advisers of the board. Since architecture and landscape architecture have now become

well-recognized professions for highly trained men in the United States, it has become inexcusable in university trustees to erect buildings without the most careful possible consideration of their designs and of the relation of each building to its neighbors, or to plant buildings about their grounds without reference to the future buildings which the university is sure to need.

The poverty in which almost all American universities have grown up has compelled their trustees to accept any provision for the needs of the moment, and to use their limited means in the most economical way for present purposes without regard to the needs of the future. They have, therefore, too much neglected the study of order and beauty in the lay-out of university grounds, and have incurred great losses through the erection of buildings which were not fireproof. They needed spacious shelters so urgently, that they ran the risk of building large combustible structures instead of smaller fireproof ones. These conditions of poverty are now passing away,

and it is emphatically the duty of university trustees to erect buildings, lay out their open grounds, and plant them, with reference to the sure centuries of affectionate use. University grounds and buildings can now be arranged to last, which seems to be more than can be said for any other buildings in the United States, with the possible exception of some government buildings and some country churches. It may not be very important to study carefully the design of a house, factory, shop, office-building, or church, which is likely to be burnt, torn down, or converted to new uses within seventy years; but grounds and buildings which really have a chance to prove permanent ought to be studied in the most careful manner possible. Because of the importance of this function of university trustees, it is highly desirable, whenever the conditions permit, that trustees should be selected who feel a real affection for the university which they are to govern, and for its surroundings. Strangers will, as a rule, not make so good trustees as children of the house.

The trustees of an endowed university have a somewhat difficult duty in regard to the acceptance of gifts. There are gifts which it is highly inexpedient to accept, — as, for instance, a gift for a specified object which is not of a surely durable nature, and yet comes without discretion for the trustees as to other applications of the gift when its specified use shall be no longer possible, or a gift which would impair religious toleration or academic freedom, or a gift which cannot be utilized without bringing new charges on the university itself. The trustees must endeavor to divert benefactors away from any such gifts as these and towards safe objects, or must procure modifications of the terms of proposed gifts, so that these dangers may be avoided. Thus a small building with an adequate endowment for its running expenses and maintenance will generally be a more acceptable gift than a larger building without endowment. Living benefactors are generally willing to modify terms of gift in accordance with well-considered university policies which have been avowed and declared,

and have served as guides in other instances. Indeed, many benefactors are grateful for advice which, if acted on by them, will tend to make their benefactions more useful and more durable. In order to maintain public respect for the endowment method, it is highly desirable that university trustees exercise a sound discretion as to the terms of proposed gifts. Thus far there have been very few instances in the United States of objectionable endowments, — objectionable because pauperizing, illiberal, or useless; and in consequence the endowment method, far from being distrusted by the American public, is looked upon with high favor, as a beneficent application of private resources to public uses. It is for university trustees, by the exercise of good judgment in the acceptance of endowments, to maintain and extend the public's appreciation of their value.

The trustees of a State university need much wisdom and foresight in suggesting to the legislature which appropriates money for the university the specific objects of appropria-

tion. The legislature itself cannot be expected to discern and contrive the wisest appropriations for the university, and therefore should receive from the trustees advice based on a thorough knowledge of the work already done by the university, and a clear anticipation of the new work it ought to do, in order to develop the intellectual resources and powers of the entire population. In order to perform this function well, they will need the best advice which presidents, deans, faculties, and faculty committees can give them; but they must finally take action on their own best judgment concerning the needs of the university and the State.

A university should not be carried on, like a business corporation, with any policy of laying up undivided profits, or of setting aside unused income for emergencies or future needs. On the contrary, it should endeavor to expend all its available income. While it should never live beyond its means, it has no call to accumulate for the benefit of future generations. For enlargements, new equip-

ments, and the occupation of new fields of usefulness, it should rely on new endowments or new annual receipts; or, if it be a State university, on new appropriations. In endeavoring to use all its proper income, it may sometimes incur a deficit; but it should forthwith take measures to prevent the recurrence of such a deficit, since habitual deficits, however incurred, must be charged either to past endowments which ought to be held unimpaired, or to future resources which are only hoped for. Each of these methods is objectionable in itself, and each sets a bad example to educational, charitable, and religious institutions.

From the board of trustees issue the statutes which determine tenures of office in the university, the constitution and powers of the faculties and other academic bodies, the definitions of the duties of the president, the deans, and other administrative officers, the division of the academic year into term-time and vacation, and the general rules under which libraries and scientific collections are

to be used. The enactment of the statutes which keep in tolerably stable form all these definitions and regulations is a weighty part of the duty of the trustees. It is by means of statutes and standing votes that the trustees formally delegate a large part of their powers of management and control to various academic bodies and officers; but in many institutions custom or usage, their own or imitated, has much to do with the distribution of powers among the different academic bodies. It is the common custom for trustees to consign to faculties the determination of the requirements for admission and for the several degrees, of the methods and limits of instruction, and of the daily routine of duty for students and teachers, the administration of discipline, and the immediate supervision of the conditions of the academic life. Trustees should never interfere with matters once consigned to a faculty by statute or custom, unless in the way of inquiry or informal suggestion, or exercise any powers delegated to a faculty. Such interference will impair very

injuriously a faculty's sense of responsibility and its authority. Trustees should also be careful not to impair the due effect of official action on the part of a faculty by listening to the private representations of individual members of the faculty who do not agree with the action of the majority. In grave cases the opinion of a faculty minority may properly be presented officially to the trustees.

The statute which defines the tenures of office throughout the university is of fundamental importance; for it is practically the expression of a contract between the university and its teachers and administrators. This contract ought to provide for life-tenures after adequate periods of probation. Life-tenures in a permanent service are by far the most economical and effective; but they are impossible in a service which must always be kept in a high state of efficiency, unless the incumbents have been so well proved, that nothing but bodily disability, or some similar calamity, can interfere with their usefulness, and also unless a pension system provides for

the humane retirement of incumbents whose efficiency is impaired.

The determination of the limits of term-time and vacation by statute necessarily belongs to the trustees in a university; because all the teachers and other officers of the university have a direct personal interest—not necessarily pecuniary—in the amount of vacation. The trustees, in making the division of the year, must consider not only the interest of the teachers, but that of the students, and the interests of these two parties are somewhat divided. Some of the richer students want short terms for study and long vacations for purposes of pleasure and travel; while many of the poorer students also want long vacations for the purpose of earning money in outside occupations. On the other hand, some of the richer sort are entirely ready to occupy a large portion of the summer vacation with reading and study; and some of the poorer students find it easier to earn money in term-time than in vacation, because they can then teach other students, and obtain a variety of

employments at the seat of the university which are not obtainable during the summer vacation. In a country like Scotland, where many sons of poor families resort to the universities, the amount of term-time during the year will naturally be made short, in order that the student may have at least half the year to earn the money which he spends at the university during the other half. In universities like the English Oxford and Cambridge, on the other hand, which are chiefly resorted to by the sons of well-to-do families, a quite different motive may determine short periods of residence at the university in each academic year, and long vacations and recesses. Athletic and social distractions from study are urgent during residence, and are the main objects of unambitious or sportive youth; while serious students find the long vacation more available for study than the short terms spent in residence. Hence in England short terms and long vacations. The American universities in general require residence for something less than thirty-seven weeks out of the year, a period of residence

decidedly longer than that of the European universities in general. During the nineteenth century the arrangement of terms and vacations in the American universities underwent many changes, because of changes in the habits of the families from which their students were derived, and in the customs of the trades and professions. Changes in the mode of conducting country elementary schools also brought about changes in college vacations. Thus, fifty years ago undergraduates in the American colleges left college in large numbers about Thanksgiving to teach country schools during three months of winter; and one of the long vacations of the year at the colleges was made to fall within this period. With the substitution of women teachers for men in the country schools, this practice among collegians has disappeared, and with it has gone the long vacation in winter.

University trustees, in considering the division of the academic year into term-time and vacation, have also to consider the value of a long vacation for the teachers of a uni-

versity, and especially for those teachers who wish to give a large portion of their time to literary or scientific labors which lie outside of their teaching, though contributory to it. The long summer vacation is for many university officers the most laborious and productive season of the whole year, and trustees who value this sort of activity on the part of the university's officers will be slow to interfere with that vacation, even though they recognize that in the interest of the majority of the students a shorter vacation would be better.

The general rules under which libraries and scientific collections are to be used are subjects for careful consideration on the part of university trustees. On the one hand these expensive collections can have but one justification, namely, that they are constantly and effectively used; on the other hand, they need to be preserved in good condition for the benefit of future generations of students. The problem of the trustees is to lay down rules which will provide a safe middle way between use which tends towards destruction and se-

curity which is inconsistent with use. The tendency at the present time among trustees is to divide the collections into two parts, one part to be preserved at the risk of not being so serviceable to the present generation as it might be, the other to be made as serviceable as possible to the present generation, even at the risk of destruction.

An experienced board of university trustees will always maintain a considerate and even deferential attitude towards the experts whom they employ as regular teachers, occasional lecturers, and permanent administrators. They stand to these experts in an entirely different relation from that in which a business board of directors stands towards its employees. In the first place, the trustees are not themselves expert in any branch of the university teaching, and they are not experts in the policy or discipline of a university. They are completely dependent for the competent performance of the university's main work on the attainments and the good-will of the university teachers. Moreover, the supply

of competent teachers and investigators for the service of universities is ordinarily scanty and irregular; so that university trustees, who seek all possible aids, often fail to find men well fitted to undertake the more difficult functions of university teachers. On this account the trustees may be quite unable to carry out well-made plans, and be forced to take up with inferior or modified designs. Again, the advanced teaching of a university cannot be obtained on a telegraphic order. It must often be long prepared, through years of anticipatory selection, watching, and waiting. It is often impossible for trustees to procure in the market the human article they need, or think they need. From this state of things it results that competent trustees, who are responsible for the university and understand their own situation, treat the scholars who compose the university's staff with great consideration, and try to secure for them the respect of the entire community.

Experience in the management of a farm, a shop, a railroad, a factory, or a bank may

be of some use to the business man called to the function of a university trustee; but many of the things he has learnt to value in his business experience he will have to discard absolutely in contributing to the management of a university, because they are inapplicable. Thus, a pure business man generally thinks that he can buy such service as he needs, if he is willing to pay its price; and in this view he is ordinarily right. That conception, however, has but a small place in the management of a university; for money cannot buy the best of the services that are really needed. Money is not the appropriate reward for the quick sympathy, genuine good-will, patience, and comprehensive learning which go to the making of a first-rate university teacher.

The trustees of the American universities have a difficult problem to solve in the near future in creating a definite university organization, and bringing the new organization into fitting relations with the secondary schools on the one hand and the professions on the other. The American universities

have grown in a casual, agglutinating way, without any definite plan or framework to tie together the different departments which were successively created. They have ordinarily started with the somewhat definite organization called a college, and around this college have grown up an undergraduate department of applied science including agriculture and engineering, and so-called professional schools of law, medicine, dentistry, pharmacy, finance or commerce, and, in a few cases, divinity. The standard of admission to the professional schools has usually been much lower than the standard of admission to the college; and indeed in many universities there have been no requirements at all for admission to the professional schools; so that anybody could enter them, with or without any preparatory education. Their students were therefore very heterogeneous in quality, and were, as a rule, looked down upon by the college students who were candidates for the degree of Bachelor of Arts. Now a group of detached, unrelated schools is not a university; and it is for the

trustees of the larger American institutions of the higher education to convert these groups of schools into true universities. As a matter of history, the first steps towards this reform were taken by instituting courses of instruction for the higher degrees in arts, such as the Master's degree and the degree of Doctor of Philosophy, admission to this advanced instruction being conditioned on the possession of a Bachelor's degree.

The graduate schools of arts and sciences, most of which have been established during the past thirty-five years, were organized in this way, and the success and high usefulness of these graduate schools indicated that the method they had used could be applied to other professional departments. All the professional schools of a university ought to require the preliminary degree of Bachelor of Arts, or of Science, for admission; and only when this requirement has been successfully enforced will the unorganized group of separate departments which now passes for a university in the United States be really converted

into a true university. This conversion, however, presents many difficulties, among which not the least is the pecuniary difficulty. It is, therefore, a difficult piece of work for the trustees of a university to undertake; and to accomplish it well will task both their far-sightedness and their judgment.

Much has been written about the distinction between a college and a university. It is no wonder that public opinion has been at a loss on that subject, since it has had no correct standard of university organization. When the American university is properly organized, it will become clear to the public that a college is a place of training for the first degree in arts or science obtainable at about twenty-one years of age, and that a university is a place for older students who already possess the preliminary degree in arts or science, and are studying for higher degrees in large variety. Of course a university may or may not carry on also a college. This change of organization should be accompanied by a change in the common ideal of the culti-

vated man, and of cultivation itself. The professional students in a university under the new régime will be, on the average, decidedly the superiors in age and cultivation of the college students; because they will be older men, who have already received the college training; and whatever may be the subjects of their advanced studies, they will all be recognized as cultivated men, — and cultivated through their professional studies quite as much as through their college studies. The bread-and-butter motive should not prevail in a university's professional school to any greater extent than it should prevail in a college. In both departments it is reasonable for the individual student to keep in view the means of by and by earning a livelihood; but in both alike the dominant motive should be the desire to be serviceable, and to be well equipped to give, and to enjoy giving, effective service.

It is obvious from this description of the functions and responsibilities of university trustees that service on such boards is in high degree interesting, useful, and honorable.

II

AN INSPECTING AND CONSENTING BODY — ALUMNI INFLUENCE

The trustees of an American college or university, whether the institution be endowed or tax-supported, are as a rule "one body corporate and politic in deed, action, and name," to use the language of the charter of Dartmouth College given in 1769. This one body holds all the property of the institution, controls its expenditures and its policies, and makes all its laws. Even boards of directors for business corporations are generally less independent and absolute than this educational board.

The number of trustees is very various. Thus at Dartmouth College the trustees must be twelve and no more. The original corporators of Brown University numbered forty-seven persons; but the Corporation consisted of two branches, "to wit: that of the Trustees and that of the Fellowship, with distinct, separate, and

respective powers," the number of the Trustees being thirty-six, and that of the Fellows twelve, inclusive of the President, who must always be a Fellow. The charter of the Collegiate School of Connecticut, now called Yale University, given in October, 1701, created a body of "Trustees, Partners, or Undertakers [originally ten ministers], together with such others as they shall associate to themselves, not exceeding the number of eleven, or at any time being less than seven." In 1792 the Governor, Lieutenant-Governor, and six Senior Assistants in the Council were made by virtue of their offices Trustees, or Fellows, of said College; in 1819 six Senior Senators were substituted for the six Senior Assistants; and in 1872 six persons elected by the graduates of Yale College were substituted for the six Senators. The constitution of Michigan provides for the election by the people of eight Regents of the University, elected two at a time every other year, so that each Regent serves eight years. The government of the University of Wisconsin is vested "in a

Board of Regents to consist of one member from each congressional district, and two from the State at large, at least one of whom shall be a woman, to be appointed by the Governor." In addition, the State Superintendent of Instruction and the President of the University are ex-officio members of the board. The term of office of the appointed Regents is three years. The government of the University of California is vested in an incorporated board called "The Regents of the University of California." This board consists of twenty-two members, six ex-officio, eight appointed by the Governor with the consent of the Senate, one every other year for a term of sixteen years, and eight chosen by the official and appointed members who also hold office for the term of sixteen years, one member going out at the end of each successive two years. It will be noticed that the term of service in this board is long, and that the renewal of membership is gradual. Since ex-officio members are rarely able to give much time or thought to such a trust, the control of the university may fairly

be said to be in the hands of sixteen persons, or a majority thereof. This board is provided by Statute (Chap. CCXLIV, Sect. 16) with an unusual sort of secretary, whose extensive duties and large qualifications are minutely prescribed. Under this statute the Secretary of the Regents might easily become the most important official connected with the university.

The board of trustees of many endowed institutions fills its own vacancies, which is never the case in State-supported institutions. Such boards are close corporations indeed. In some denominational colleges and universities the trustees, or a majority of them, are selected or appointed by denominational authorities. Thus, in institutions under the control of the Methodist denomination, a majority of the trustees is often chosen by a group of Methodist Conferences.

However selected, chosen, or appointed, the members of the board of trustees of an American college or university ordinarily constitute a single governing board which is not responsible to any affiliated or independent board,

and is not obliged to procure the concurrence or consent of any other body. They therefore need the steady influence of a larger inspecting and criticising body with some concurrent powers, in order that they may escape the dangers of perpetual corporations subject to no external control. When the trustees are somewhat numerous and meet but rarely, because their residences are widely separated, the main body may exercise in an imperfect way this function of inspection and control over the small executive committee to which the powers of the full board are of necessity delegated; but whenever the board of trustees is of moderate number, not widely separated as regards residence, and consequently diligent and active, it is highly desirable that a second and larger board should be created to represent public educated opinion, and particularly the opinion of the graduates of the institution. This is especially the case if the board of trustees is empowered to fill its own vacancies.

In this respect the organization of Harvard

University is a most fortunate one; for the University possesses a second Board, called the Overseers, and consisting of thirty members, since 1866 elected by the Alumni in groups of five to serve six years, together with the President and Treasurer of the University ex-officio. Other institutions have endeavored to gain some of the advantages which Harvard derives from its Board of Overseers by contriving the election of some of their trustees by the Alumni, or inventing some equivalent device; but none of these contrivances are as effective as the Harvard Board. The composition of that admirable Board underwent many changes between 1642—the date of the first Act establishing the Board—and 1902, when the legislature finally placed in the hands of "the President and Fellows of Harvard College and the Board of Overseers of said College" the power to determine "what degrees issued by said College . . . shall entitle the recipients thereof to vote for Overseers"; but for more than forty years, since 1866, its statutory constitution has left nothing to

desire. By statute and custom the Board of Overseers must give consent to the election of every member of the Corporation, — the short title of the President and Fellows of Harvard College, — of every professor, assistant professor, preacher to the University, and administrative officer, and of all other officers of instruction elected for terms exceeding one year. They must also act on appointments by the Corporation of directors for scientific establishments, and of librarians. In short, the Board exercises a control over all important appointments within the University. It is also entitled to take concurrent action with the President and Fellows on the adoption of all statutes or standing votes affecting general policies of the University, and on the conferring of all degrees.

The influence on the President and Fellows of this constant need to procure the consent of the Board of Overseers is strong. Every appointment and every statute or standing vote must be capable of defense before the Overseers. The fact that the consent of the Board

of Overseers is almost invariably given to the action of the President and Fellows does not diminish this influence, or have any tendency to prove that the influence does not exist. The President and Fellows always feel that they must be able to make a strong case before the Board of Overseers in favor of any action which requires the consent of that Board; and this feeling is a very wholesome one in a small board the members of which are elected for life. The Board of Overseers may fairly be said to represent public educated opinion and the opinion of the Alumni on all questions of University policy. For many years the Massachusetts Statutes required members of the Board of Overseers to be "all inhabitants within the State"; but in 1880 this restriction was repealed; so that members of the Board have for twenty-eight years been eligible from any part of the country, or, indeed, from any part of the world. The Board meets ordinarily nine or ten times a year; but in spite of the frequency of the meetings, it has been found possible to take members from

distant parts of the country. The existence of the Board of Overseers greatly increases public confidence in the management of the President and Fellows, and this confidence extends to all the functions of the President and Fellows, financial as well as educational.

Besides this right of consenting to or dissenting from all important actions taken by the President and Fellows, the Overseers exercise freely the right of inspecting, or examining the condition of, any and every department of the University. This inspection or examination is conducted by committees appointed by the Board, and these committees may or may not consist, in whole or in part, of members of the Board. All the instruction given in the University is thus liable to be inspected by visiting committees appointed by the Overseers; and the reports of these committees are made public, or kept private, at the discretion of the Board. The nature of the instruction in any department, and of the examinations held by any department, may thus be made the subject of a public report. It is of course diffi-

cult to obtain for all departments men, not members of the University's staff, who are competent to criticise the work of university teachers, particularly as the service of the Overseers themselves, and of all the committees that they appoint, is gratuitous. Nevertheless, this function of inspection or examination has a high value, now in one department of the University and now in another. It checks eccentricities, brings out defects, and signalizes merits. The Visiting Committees have authority to examine all question-papers prepared for university examinations, and all the papers written by students in answering those questions. Since at Harvard, as at the American universities in general, the instructors have charge of the examinations in the courses they have themselves given, this disinterested judgment of outsiders on the question-papers and answer-papers may at any time have a high value.

The Overseers' Visiting Committees have, however, a function which is more effective than that of criticism. In inquiring into the

condition of any department — as of French, Physics, Zoölogy, Law, or Medicine — the Committee naturally puts itself into contact with the teachers of the department, confers with them, and learns from them the needs and hopes of the department as a whole. These needs the Committee, as an impartial body appointed for purposes of inquiry and examination, can put before the President and Fellows, the other academic bodies, and the public much more effectively than the teachers themselves can. Thus the Visiting Committees become instrumentalities for coöperating with the departments in raising money to meet urgent needs, or make improvements. In an endowed institution the coöperation of such Committees in giving publicity to needs and procuring the means of meeting the needs is of great value. Over and over again the Visiting Committees of the Harvard Board of Overseers — now in one department and now in another — have procured additional resources for the University, — sometimes by contributing themselves, but more frequently

by calling upon public-spirited persons known to be interested in the objects the Committees were trying to promote. The Visiting Committees thus enlarge the circle of Harvard's benefactors, and place in the hands of the President and Fellows new resources, sometimes to be expended for immediate needs, and sometimes to be funded as permanent endowments. At Harvard there were forty-eight such Visiting Committees of the Board of Overseers during the year 1906–07, two Committees having three members, several having four, and the larger Committees numbering from nine to eleven members. The members of the Committees generally have their interest in some department of the University's work much quickened, and this quickened interest they diffuse, each in his own circle of acquaintances; so that there results a large body of persons who have some exact knowledge of the University's work and needs, and are interested in supporting the University in every way. This system at Harvard is an outgrowth of an ancient practice

of the Board of Overseers to appoint committees to attend the oral examinations of the four classes in Harvard College held twice a year, at the end of each of the two terms. When the periodical examinations ceased to be oral, these semi-annual visits from committees of the Board of Overseers were discontinued, and the present system was gradually developed as a substitute. By 1881–82, fifteen years after members of the Board of Overseers began to be chosen by the Alumni, the present system was well under way. It has, however, been continuously enlarged and improved. It is primarily an admirable means of publicity, and therefore affords protection not only against errors or abuses in administration and instruction, but against indifference and sluggishness on the part of the administration, or of any of the academic bodies or officials who exercise delegated powers. Since a university inevitably tends to undue conservatism, a friendly criticising, probing, and stimulating agency can be very useful to it. The organization implies the existence within easy reach

of the University of a large community in which the higher education has long been well established, and public spirit and constructive benevolence towards education are held in high honor.

It is a grave problem how to get the advantages of the Harvard system in a university which has but one governing body, and that a large one meeting infrequently. Something can be done by small sub-committees of this large body; but unless many of the trustees are elected by the Alumni, these sub-committees will not be believed to represent Alumni opinion. Any board of trustees might organize visiting committees analogous to the Harvard Committees; but committees so selected could hardly command the same confidence as critics and inspectors which the Harvard Committees, appointed by a separate body whose primary duty is supervision, can reasonably command.

The influence of the Harvard Board of Overseers is not exerted through criticism and inquiry only. Their action has sometimes been constructive in a high degree. Thus in 1766

it was the Board of Overseers, and not the President and Fellows, that accomplished the great reform of making the college instruction departmental by subject. Before that date one tutor had been assigned to each entering class, and had taught that class in all its subjects for four years. At the instance of the Board of Overseers, each tutor thereafter taught the same subject, or kindred subjects, to all the four classes. The president and the three professors of that day had already dealt with their several subjects before each successive class; so that all the instruction in the College became from that date departmental. This reform was as fundamental as the similar reform now, made in a high school or academy. In the first quarter of the nineteenth century, it was the Board of Overseers that planted the seeds of the elective system, which was to have but a feeble growth for forty years. It survived, however, and then throve and blossomed. Again, it was the Board of Overseers that, in 1826, ordered that the president of the University should make to

them an annual report accompanied by a complete treasurer's statement, the report to cover all important acts and events for the year, together with remarks on the state of the institution, and on the measures recommended for its improvement. This report was ordered to be printed and laid before the members of the Board at the stated meeting in January. This order was a piece of first-rate constructive legislation, and has been obeyed to this day with good results to Harvard University and American education in general; for the president's annual report to the Overseers has always described frankly and completely the state of the institution, its defects and merits, the results of its experiments, its progress, and its needs. In so doing, it has put the experience of Harvard University at the service of all other institutions. Again, in the year 1866–67, the Board of Overseers, after a long interchange of divergent views between the President and Fellows and the Board, succeeded in introducing an important change in the distribution of the income of the general

investments of the University among the funds belonging to the College on the one hand, and to the professional departments on the other. The President and Fellows had long been in the habit of allowing 5% on the funds belonging to the non-College departments, and appropriating to the College the rest of the income of the general investments. The Board of Overseers procured the distribution of the average income of the general investments to all the funds held by the President and Fellows, after reserving a moderate allowance for the expenses incurred in the care and management of the funds. This measure, which was not welcome to the President and Fellows of the day, has turned out to be a very wise one. It has been highly satisfactory to benefactors, has prevented the creation of separate boards of trustees for special objects at the University, and has exerted a distinctly unifying influence in the whole University administration. No more important improvements in Harvard University have been made in the past one hundred and fifty years than the four above

mentioned, and all four proceeded from the Board of Overseers.

A good example of another mode of action of the Overseers is to be found in the abolition, in 1886, of the required attendance of the students at the religious exercises maintained by the University. For nearly two hundred and fifty years attendance at numerous religious services had been required of all students in Harvard College. The two governing boards came very slowly to the abolition of that requirement. Beginning in 1873, the College Faculty four times declared that, in their judgment, attendance at prayers should be voluntary. The students had twice petitioned that the statute which prescribed attendance be changed. The President and Fellows were in favor of making the change, whenever it should appear that the public opinion of educated men, and particularly of the Alumni, would sanction it. For ascertaining the state of public opinion, the President and Fellows relied on the Board of Overseers. Under the guidance of a committee of the

Board of Overseers, the two governing boards first made a more impressive and interesting provision for the conduct of religious services in Appleton Chapel than the University had ever had before. The Plummer Professorship (then vacant) was filled, and five preachers to the University taken from four denominations were appointed for the term of one year, the appointments to be renewable indefinitely. To this board of six ministers the conduct of the Chapel services and the pastoral care of the body of students were committed, with a large discretion as to their methods of action. This board then advised the Corporation and Overseers to abolish required attendance at religious exercises; and the necessary change in statutes was immediately made.

The first board of preachers consisted of Edward Everett Hale, Phillips Brooks, Alexander McKenzie, George A. Gordon, and Richard Montague; but Mr. Montague was unable to serve because of the failure of his health. Messrs. Hale and Brooks were at the time members of the Board of Overseers,

where they had taken an influential part in the discussion. In this instance the time of action in a very important matter was determined by the Board of Overseers; because the President and Fellows, the Faculty, the other academic bodies, and the Alumni felt that the Board fairly represented public opinion in all its different shades, and that it would be safe to make a great change in a matter which easily stirs strong sentiments and passions, whenever the Board of Overseers were clearly in favor of making it.

The meetings of the Board give opportunity for able men engaged in different professions to give utterance to their ideas on education in general, or on some special educational topic which has interested them. The Alumni, who elect the Board, naturally select men of letters or science, and men eminent in the learned or scientific professions or in business, who have shown public spirit, and devotion to the interests of the University, and of the higher education in general. A Board so selected is naturally capable of improving

sometimes the measures which come to them from the Corporation. Their rules and habits prevent hasty action, and often provide for an examination by a committee of the measures laid before them. They save the University from making changes which, although promising and even of demonstrated merit, are nevertheless too much in advance of public opinion. When the President and Fellows, led by the Faculties, are too rapid or too experimental in their action, the Board of Overseers will serve as a brake; but if the President and Fellows become inert or too conservative, the Board of Overseers will provide the needed stimulation.

On the whole, the services of the Board of Overseers to Harvard University are so varied and so great as to suggest strongly the wisdom of procuring some analogous boards for purposes of inspection, review, criticism, and support in all other American institutions of the higher education. Indeed, the history of the Harvard Overseers suggests that similar boards to inspect, make criticisms and

suggestions, and procure publicity would be useful additions to the boards of directors which manage business corporations, and to one-chambered municipal governments or commissions.

The American colleges and universities receive a deal of valuable advice and assistance from their graduates, not only from individuals, but from the numerous organizations of the graduates. These organizations are all the more interesting, because they are of purely American growth, being a natural adaptation of democratic principles to educational institutions, and a vigorous expression of the American faith in education of all grades as the best means of promoting wise democratic government, industrial efficiency, and public happiness. As active organizations they have nearly all been created within the last fifty years.

The first organization to attain real efficiency was the permanent organization of what is called a college Class, that is, the group of

men who took the first degree in arts or science in the same year. This Class organization is now maintained not only for social purposes, but as a group of men who distinctly propose to befriend and support each other in every practicable way throughout life, and who also intend, as a group, to befriend and support the college or university at which they took their first degree. Every Class maintains a standing committee and a secretary and treasurer. At or near graduation they raise a fund the income of which is to be used for future festivities and other Class expenses, and is to be made over to the college for some good purpose when the Class becomes extinct. When general subscriptions are undertaken for the benefit of their college, every Class organization takes part in the effort, and all the Classes vie with each other in making contributions. At Harvard College, it is the custom for each Class, at the twenty-fifth anniversary of its graduation, to make a considerable gift to the College ($100,000 or more) for an object selected by the Class. Every Class tabulates the

vital statistics of the whole group, including the dates of marriage, births of children, and deaths of members and of their children, and also a record of the career of each member of the Class. Many Classes keep these records for all the men who have ever been members of the Class, whether they graduated or not. As the Harvard graduating Classes have lately increased much in size, the labor of keeping these records, and printing them every three or five years, has become too great for the Class Secretary — presumably a busy man — to perform; so that it has become the custom for the Class officers to hire an expert to prepare the vital statistics of the Class. At the Commencement season every Class holds a social meeting, and on the third, sixth, tenth, and every later quinquennial anniversary of graduation, special festivities are held, particularly on the twenty-fifth and fiftieth anniversaries. At Harvard the wives and children of members attend the twenty-fifth anniversary, and the celebration lasts for several days. To the fiftieth anniversary children and grand-

children are invited; and, moreover, the Class just fifty years out of College entertains the members of all older Classes who come to Commencement. As each Class grows older, the surviving members are drawn nearer together, and the more interesting becomes the comparison of careers, experiences, achievements, and services. Several Harvard Classes have undertaken to make photographic albums in which the portrait of each member at graduation faces the portrait of the same person forty or more years later, if he has survived so long. These documents are extraordinarily optimistic, the comparison of the faces at twenty-two or twenty-three with the faces at sixty-two or sixty-three offering convincing evidence that educated men's experience of life develops both capacity and character to an extraordinary degree.

The vital statistics of the American College Classes, as they accumulate, will supply to the statistician a large body of interesting materials; the photographic albums will demonstrate the continuous and prolonged good effect of

an education which occupies from a quarter to a third of the entire span of life; and the records of the careers of the graduates will supply the best possible evidence of the efficiency and usefulness of the institution at which they were trained. All these Class activities are highly desirable in all colleges and universities, and with appropriate modifications are universally practicable.

Next to the Class organization comes the organization of the association which embraces all the Alumni of a college, that is, all the men who took their first degree of arts and science at the institution, some of whom may take a higher degree or degrees in arts and sciences, or a professional degree. It has been the custom at Harvard, as at other American institutions, for the graduates of the professional schools to maintain Alumni associations of their own, as, for instance, an organization of all graduates and students of the Law School; so that four, five, or more Alumni associations may be created from the graduates in the different departments of the same university.

The objects of all these Alumni associations are, however, essentially the same. They keep in touch with all Alumni of the department whose name they bear, keep their addresses, and prepare lists showing the geographical distribution of the Alumni by states and cities. At a large university which graduates many hundred men each year, it is a difficult task to keep these address-lists valid. A small number of men fail to communicate with the secretary of the association to which they ought to belong, and after a time are lost to view. The address-lists serve several purposes. In the first place they enable the officers of the association to keep in communication with the men whose addresses are recorded. Secondly, they enable the administrative officers of the university to keep graduates of the university in all departments supplied with printed information concerning the growth of the university, the changes in its methods, and the additions to its resources. Thirdly, the geographical lists enable the graduates of any college who have settled in any particular district or region of

the country to find each other out, and come together.

The various Alumni associations at Harvard University recognize early, and then help to bring to public knowledge, improvements in their several Departments, as well as needs, and they then confirm and settle the educational changes by embodying their results in their own constitutions and modes of social action. At Commencement time most of them hold meetings which bring together large bodies of professional men interested not only in meeting each other, but in promoting the welfare of their several Departments, and in upholding and advancing the ethical standards of their several callings. The gathering at Commencement of the Association of the Alumni of Harvard College, which now includes graduates of the Scientific School and holders of the degree of Master of Arts or Science and of Doctor of Philosophy or Science, is always a noteworthy gathering, which by its public proceedings and its hospitalities to distinguished guests adds to the dignity and prestige

of the University. This association now maintains a paid secretary with an office and staff in the business centre of Boston, in order to be of service to visiting Alumni, in both business and social ways. This new provision is an outcome of the democratic and national quality of the University, and of the distribution of the residences of the Alumni over the whole country, and over great areas beyond. It marks also the purpose of the Alumni to coöperate with each other throughout life in the promotion of the interests of the University, of higher education, and of public serviceableness of all sorts.

The next form of organization is the local club, composed of the graduates of a single institution who live in one place, as, for example, of the graduates of Harvard, or Dartmouth, or Michigan, living in or near New York City, or in or near Chicago, or in the State of Kentucky, or in the State of California. These local organizations can exert a strong influence in favor of the university with which its members were connected, provided

that they prove to be possessed of enthusiasm, mutual good-will, and public spirit. They can add to the security and happiness of the recent graduates who flock year by year to the great cities. They can easily promote the interests of the universities to which they are grateful by instituting scholarships at the college or university of their love, for which scholarships young men from the locality which the club represents have a preference. Such clubs can also debate actively new policies which are under discussion at their college or university, and express their opinions thereon by resolution adopted in public meetings after discussion. Their members can inspire each other to rendering good public service in the municipal, state, or national administrations, and to serviceableness to the communities in which they live. The local clubs can be effective in recruiting the colleges or universities to which they are severally attached, by endeavoring to improve the programmes of the best secondary schools in their neighborhood, and taking an interest in the bright pupils of those schools.

They can also give information about the terms of admission and the necessary expenses at their several colleges. Among the members of these local clubs the diversity of age is very great — all the way from twenty to twenty-three up to seventy to eighty — a fact which sometimes makes their social meetings rather hard to conduct in an enjoyable way; yet this very diversity of age contributes much to the good influence of the clubs. The achievements of the elders inspire the juniors, and the older men get interested in the younger, and help them on by advice and influence.

A considerable number of Harvard Clubs, most of which are situated between the Alleghanies and the Rocky Mountains, have united in an Association of Harvard Clubs which holds large, animated, annual meetings by delegates, at which college policies are discussed, the condition and prospects of the various clubs are compared, and desirable candidates for election to the Board of Overseers are mentioned and discussed in private. At these representative meetings of Harvard

Alumni gathered from a large area, officers and active friends of the University have an opportunity to be heard.

The university administration itself can assist in the maintenance of these organizations of its Alumni by publishing periodically the catalogue of all its graduates from the beginning, and a list of the present addresses of all living Alumni. Every American college or university performs the first function ; but comparatively few perform the second, although the second is the more effective for promoting the influence and increasing the resources of a university. Some institutions have refrained from issuing such a list, or delayed so doing, for fear that these address-lists, if printed, would be used in an annoying way by diligent advertisers through circulars and letters. The demonstrated usefulness of the lists for rightful purposes has, however, overcome this apprehension.

The natural interest of older Alumni in helping the younger is now utilized in a systematic way by colleges and universities which main-

tain offices devoted to securing appointments and promotions for their graduates. This very useful sort of bureau was first copied by Harvard University from Oxford University, and thence spread into other American institutions. The method is not yet fully comprehended among American college graduates, but it is so natural and helpful a method that it is sure to become general. At first the profession served by the Harvard Appointments Office was almost exclusively that of teaching; but in a few years the work of the office came to cover a great variety of professions including business. The same office can readily provide various employments for undergraduates, and so make easier the successful passage through college of young men of limited means. Both these functions are obviously democratic in a high degree. They enable well-educated young men who have neither money nor helpful family connections to obtain high-grade employments, and rapid promotions therein, on the strength of their college records, and with the help of the acquaintances they made in

college. They are often equally useful, however, to sons of well-to-do families who are seeking employments with which their older friends have never been connected.

The interest and affection of an institution's graduates may be utilized to its advantage and that of education in general through the graduates' support of publications which record all important events at the institution, commemorate the achievements of its graduates, describe the athletic games and contests in which its undergraduates take part, and give interesting accounts of the acquisitions at its museums, the investigations in its laboratories, and the publications of its teachers. At Harvard University, for example, a Graduates' Magazine, issued quarterly, an official Gazette, and an unofficial Bulletin, issued weekly, are maintained through the annual subscriptions of the Alumni; and all three publications are highly serviceable to the University.

Two comparatively new universities — Johns Hopkins and Chicago — have paid especial attention to the issue by the university

itself of learned publications in considerable variety and volume, quite surpassing in this respect the earlier efforts of some older American universities. Such publications undoubtedly strengthen a university, and promote the progress of letters and science. Since they are costly and pecuniarily unremunerative, they are good objects of endowment.

Since many graduates of the principal American universities are connected with the public press as editors or contributors, university doings and events are frequently dealt with by the public press in a friendly way, with the distinct object of strengthening the universities in the estimation of the public. Most university administrators have had occasion to study the problem of legitimate advertising; but few, if any, have reached any clear conclusion on this difficult subject. It is extremely doubtful if any of the ordinary forms of advertising do a university any good. It is the general reputation of a university, its literary and scientific activity, and the achievements of its graduates which commend it to young men

and women, and to their parents; and these things cannot be set forth by the university itself in an ordinary advertisement. Public attention must, however, be called to them over wide areas of country, since otherwise they will not be brought to the notice of teachers, superintendents of schools, families, and the eligible youth; hence the usefulness of the university publications maintained by graduates or by the university itself, and of all the descriptive contributions to the public press by interesting and interested writers.

The American universities have always and everywhere been desirous of increasing the number of their students; and this is a true instinct of university governors in a democratic country. A university ought to desire to serve all classes and conditions of men, and not a single class or but one condition. Moreover, the serviceableness of the university to the community is increased by increasing the number of its students; unless, indeed, the university admits students without suitable preparation, and by so doing injures itself

and the secondary schools which underlie it. In short, in a democratic society, it is important that the university should serve all classes, and therefore command the respect and affection of all classes, else its pecuniary resources will not be so secure as they ought to be, and it will be difficult for it to obtain the new resources which in the changing condition of the professions and industries it will be sure to need.

III

THE UNIVERSITY FACULTY

For determining the educational policy of a seat of learning the faculties are the most important bodies in the entire institution. The trustees being ordinarily only men of general culture and trustworthy character, presumably interested more or less in all branches of learning, but expert in none, it devolves upon the faculties of the several departments of a university to discern, recommend, and carry out the educational policies of the institution. Under ordinary conditions a university has need of at least five faculties, namely, — a faculty for arts and sciences, and faculties for divinity, law, medicine, and applied science. There are many examples of the creation of separate faculties in addition to these five, as, for instance, a faculty for agriculture, for engineering by itself, or for the fine arts; but the sciences on which agriculture depends all

come under the head of applied science, just as engineering does, and the fine arts should certainly make part of the instruction given by the faculty of arts and sciences.

The five indispensable faculties are very unlike. The faculty of arts and sciences in a broadly developed university will necessarily be large, and its individual members will probably have a thorough knowledge of only one or two out of the numerous departments of instruction within the faculty. The mathematicians may often have little sympathy with, or knowledge of, the language departments, and will be closely affiliated only with the departments of physics, chemistry, mechanics, and astronomy. The professors of history will probably know little, and perhaps care little, about the scientific departments; but will maintain rather close relations with the departments of government and economics. Distinguished men and admirable teachers in such a faculty may easily know nothing to speak of about more than half of the subjects of instruction dealt with by their faculty.

It is very different in the faculty of law, which in American universities devotes itself chiefly to court-made law and the training of practitioners. There every teacher will know a great deal about the work of every other teacher in the faculty, and have a good understanding of every other teacher's method and mode of thought. In that faculty it is possible for one professor to teach in the course of twenty-five years nearly all the subjects taught in the school; and it is feasible for a professor well advanced in life to change his subjects completely, abandoning all the subjects he has taught for twenty years or more, and taking up a new set. A faculty of law therefore resembles what is called a department in the faculty of arts and sciences; for in the latter faculty the members of any given department are usually acquainted with the whole field of the department, and with the work of each member of it. The faculty of law will have very slight connection with any other faculty, unless, indeed, like a European law faculty, it takes up the general subject of

jurisprudence, and such topics as Roman law, constitutional law, and international law, which are appropriate also to the faculty of arts and sciences.

The divinity faculty, on the other hand, unless unfortunately devoted chiefly to dogmatic denominational instruction, will have many and intimate connections with the faculty of arts and sciences; so much so, that many courses of instruction offered by professors of divinity are just as good for students in arts as they are for students in divinity, and, conversely, many courses offered by professors in the faculty of arts and sciences will be perfectly suitable for students of divinity, such, for example, as courses in philosophy, ethics, history, sociology, the languages of the scriptures, and the history of the biblical peoples and of the great religions of the world.

The faculty of medicine has two quite distinct functions. First, to train thoroughly practitioners of medicine and surgery; secondly, to advance medical science and preventive medi-

cine. It is, however, almost exclusively a faculty of applied biology, although it also utilizes fields of physics and chemistry which lie outside of biology. This faculty is, of course, intimately related to the biological departments of the faculty of arts and sciences, because pure zoölogy and botany make incessant contributions to applied biology; and it has many affiliations with the faculty of applied science; but its connections with the other faculties are but slight.

The faculty of applied science has a different temper or spirit from that which prevails in the scientific departments of the faculty of arts and sciences. It is bent on teaching useful and profitable applications of all the sciences, and is apt to be dissatisfied with the modes of instruction in the pure sciences, including mathematics, under the faculty of arts and sciences, unless a great deal of attention is devoted day by day to applications and to practice in those applications.

It is natural and desirable that members of the divinity faculty and of the faculty of ap-

plied science should belong also to the faculty of arts and sciences; but members of the faculties of law and medicine rarely belong to any other faculty.

Two of these five faculties are distinguished from the others by the fact that many of their members act both as teachers and as practitioners. Thus all the clinical teachers in a medical school are active practitioners, — always in hospitals, and often in both hospitals and private practice. In a school of applied science it is common for the teachers to give part of their time to commercial designing and consulting; and this mixture of functions is on the whole desirable, because it keeps the teachers well acquainted with the present conditions and needs of the industries which their teaching ought to serve. Some of the teachers in a law school may also combine teaching with practice. This double function resembles the double function of teachers of economics, government, and business administration, who divide their time between teaching and authorship, or between teaching and giving advice

on questions relating to the public service or industrial administration. Indeed, in all departments it is desirable that university teachers keep in touch with the outer world of literature, science, and art, and contribute not only to the progress of the arts and sciences, but also to the diffusion of knowledge among the educated public outside the confines of the university.

To arrive at the right rules to govern membership of a university faculty is obviously a matter of the first importance. Shall the faculty be composed of the full professors in all departments, or only of the heads of departments? Shall it include assistant professors? In these days a large part of the instruction given in well-organized universities is contributed by comparatively young men, who are called instructors, tutors, or preceptors. Shall they, too, be full members of a faculty? If assistant professors and instructors be included, they will probably outnumber the full professors, and may therefore have the prevailing

voice in determining the policy of the university. In all well-organized and comprehensive universities, the number of instructors, demonstrators, and assistants will greatly exceed the number of professors and assistant professors, and many of these instructors, demonstrators, and assistants will be men who are on trial, or who have not yet determined to give their lives chiefly to teaching and research. It does not seem reasonable that the policy of a university should be determined by the votes of young men whose connection with the university may be brief, and who have not yet decided to be teachers. Membership in a faculty should therefore be limited to professors, associate professors, and assistant professors, and to those instructors who have received appointments without limit of time.

Under this rule a majority in any large faculty of arts and sciences is likely to consist of comparatively young men who are not sure to advance to the position of full professor. It is impossible, even in a large staff, that all assistant professors should be promoted to

be professors, and that all instructors appointed without limit of time should be promoted to be assistant professors. Many of these younger men must necessarily go into the service of other institutions,—schools, colleges, and universities. In this way the influence of the university is extended and its serviceableness increased.

It is of the utmost importance that every faculty contain enough young men to bring forward in debate the views and feelings of the recent college generations. To have its administration fall chiefly into the hands of elderly men is a grave misfortune for any university. There is always good work that veterans who retain their physical and mental alertness can do; but the control of a university's policy should not be confided to them alone. A small college is often in more danger of having an old faculty than a large college, for the reason that some of the teachers grow old in their places without having had the opportunity of going into the service of other institutions, and vacancies which might be filled

by young men occur but seldom. This difficulty has been relieved or removed of late years in some small colleges, because the larger and richer institutions have acquired the habit of calling into their service comparatively young men who have proved their merit in good small colleges. The small college is thus enabled to recruit its faculty with a series of young men of promise, though not of proved performance. It is natural, but not wise, for a college or university to recruit its faculties chiefly from its own graduates, — natural, because these graduates are well known to the selecting authorities, since they have been under observation for years; unwise, because breeding in and in has grave dangers for a university, as also for technical schools and naval and military academies.

A university president, or a selecting committee, in search of a new professor, or of new professors, has means of forming a judgment which are fairly trustworthy, if patiently collected and sifted. In the first place, there is the candidate's record as a student at his col-

lege or university; secondly, his reputation as a teacher, wherever he may have been employed; thirdly, his activity in the learned societies with which he has been connected; fourthly, his productiveness as an investigator and author; and fifthly, his general repute as a man of character and influence. Experienced officials pay but scanty attention to testimonials and letters of recommendation, particularly if they have been forwarded through the candidate or procured by him. Americans are apt to be too charitable and good-natured when writing letters of recommendation. They are also fond of superlatives, and are too apt to deal only with merits, omitting defects, when they write testimonials at the request of a candidate. The prudent selecting official or board will therefore be careful about giving weight to testimonials, and will greatly prefer to see and talk with the candidate himself face to face, except in the case of a man whose character and professional standing are well known and unquestionable.

Within twenty years past, numerous learned

societies have arisen in the United States, each of which is devoted to some special branch of knowledge, such as the classics, pure mathematics, engineering, chemistry, physics, architecture, landscape architecture, forestry, pediatrics, and psychiatry. To the annual meetings of these societies men come from all parts of the country, and spend a few days together in earnest discussion of topics in which they have a common interest. The professor, or professors, of these several subjects in any one university will gradually have opportunities to measure and weigh all the other active members of the same society, and particularly to see and hear the younger members of the society. Much valuable information is, therefore, to be obtained through these meetings of specialists concerning candidates for teachers' places in the colleges and universities of the country. At these meetings much can be learnt about the personality of the men who come to them. The whole meeting will learn that such a one is high-minded and winning, and a master of his subject, and that such another

is rude and unattractive, though doubtless able.

In selecting university teachers, young or old, it is always a question what sort of qualification should have most influence on the selection, — knowledge of a subject, capacity to expound it in an interesting manner, published works, success as an investigator, or the total personality, including manners and customs, temper, bearing, and quickness of sympathy. In every case there must be a balancing of these different qualities, which are rarely combined in a single individual, and a comparison with like balances in other candidates.

That university is fortunate whose faculties have been recruited in a considerable variety of ways; but first, by advancing young men who are graduates of the institution through all stages of the service, beginning with the lowest. This process should require three or four years to be spent in professional study after receiving the Bachelor's degree; then three or four years of service on annual appointments to subordinate places; next, as

many years in the position of instructor appointed without limit of time; and next, five or ten years of service as assistant professor before the grade of full professor is at last attained. It may therefore take the young graduate in arts from fifteen to twenty years to obtain a full professorship, and it will be from six to eight years after his graduation as a Bachelor before he gets an appointment which commits him to teaching and investigating as his life-work. The rapidity of his advancement will depend, first, on the number of vacancies which happen to occur in the upper part of the department to which he belongs, and secondly, on the chance that the institution with which he is connected will make a rapid growth. Both these favorable chances have frequently occurred together in the experience of young men who have gone into university work in the United States within the past thirty years.

The second mode of recruiting the university staff is to discover and make proposals to men still young who have distinguished them-

selves in the service of other institutions. The larger institution does not need to offer such men full professorships. They can ordinarily be obtained for assistant professorships, or even for instructorships without limit of time. Such persons are not taken at once into the permanent staff of the university which invites them. They receive what may be called probationary appointments, and if they do not succeed in such places, after a reasonable time, the university is under no obligation to continue them in its service.

The third mode of recruiting a faculty is to invite to full professorships men of proved capacity, industry, and intellectual productiveness. To such men the university commits itself for life.

All these ways ought to be used in recruiting any university faculty, and all three are commonly used except in the faculty of medicine. That faculty is affected by a peculiar and very unfortunate set of considerations in regard to its recruitment. A medical school is ordinarily situated at some considerable centre of popu-

lation, where hospitals have been provided for the treatment of the sick and wounded. These hospitals are usually administered each by its board of trustees, and this board feels itself to exist for the hospital alone, and is distrustful of the claims of medical education or of medical and surgical research. The hospital's medical and surgical staff is ordinarily selected by the board of trustees without reference to the capacity of its members as teachers. They are selected for unusual capacity in treating the sick and wounded. Nevertheless, the only men who can fitly hold clinical professorships in a medical school are men who have access to large hospitals capable of providing them with the cases of disease or injury which must serve as material for their teaching. The medical school, desiring to appoint a professor of surgery or obstetrics, for example, is limited in its choice to the men who hold hospital services for at least a part of the year in the city or town in which the school is situated. It is not free to call the most distinguished surgeon or obstetrician that the country con-

tains; because it cannot offer the newcomer a hospital service. This is the reason that the conduct of a great hospital has become in some universities an indispensable function of the faculty of medicine, in spite of the fact that the conduct of a hospital is enormously expensive, and requires an administrative staff quite distinct from that of the medical school. Other universities have had the good fortune to make serviceable alliances with independent bodies of hospital trustees, who have realized that the advancement of medical and surgical teaching and research is a fundamental interest of hospitals as well as of universities and States.

The motives which induce suitable young men to devote themselves to an academic life, and therefore to become members of a college or university faculty, are somewhat different from those which impel young men to enter the learned and scientific professions or to seek business careers. Those professions and business careers offer large money prizes,

although the general average of income in them is by no means high. In the United States the profession of teaching and scientific research offers absolutely no money prizes, and the average annual income of the university teacher is sure to be moderate. Germany offers exceptional payment to brilliant teachers of staple university subjects which are indispensable to large groups of students, gives generous pecuniary rewards to successful investigators in applied science, chemical, physical, or biological, and confers valued titles and decorations on her leading scholars in all departments. No such practices have ever obtained in the United States, and it is hard to imagine how they could be introduced under the democratic régime. The young American who chooses a university career must then abandon all expectation of riches, and of the sort of luxuries which only wealth can procure. What he may reasonably expect is a secure income, a life-tenure, long vacations, the gratification of his intellectual tastes, good fellowship in study, teaching, and research,

plenty of books, and a dignified though simple mode of life. To young men who grow up in humble circumstances, the probable income of a college professor sometimes looks large; but to the sons of well-to-do families it always looks small, and, on the average, the college or university salary in the United States is really small in comparison with the intellectual outlook of the recipients and their reasonable needs. Undoubtedly college and university salaries need to be raised above their present level in the United States; but it should be distinctly understood that the profession can never be properly recruited by holding out pecuniary inducements. In drawing good men from one institution to another, the prevailing inducements are apt to be, not increase of salary, but wider companionship, better access to books, better schools for the children, a wholesomer life for the family, more social and educational advantages, and the general prestige of the inviting institution. That institution is fortunate which attracts to its service young men from all conditions of life. The

recent tendency of sons of well-to-do, and even rich, families, to go into the ministry, the medical profession, academic life, and the public service, is one in which all patriots may well rejoice. Such young men, if they have intellectual ambition, and the needed capacity for teaching and investigation, contribute very much to the total wisdom and efficiency of any university faculty.

In spite of the fact that professorships are ordinarily held for life in a well-managed university, the rate at which the membership of a faculty changes is much more rapid than is generally supposed. The larger the proportion of assistant professors and instructors in any faculty, the more rapid will be the changes; because assistant professorships are best made terminable at stated periods, and instructors frequently win promotion in other institutions than their own. In twenty-five years nearly two thirds of an active faculty may be replaced, and more than half in twenty years. The existence of a system of retiring allowances, such as the Carnegie Foundation now

provides, tends to make the replacement of a large staff more rapid than it used to be before retiring allowances were provided. It is not at all uncommon for one fifth of the members of a faculty to disappear within five years. These facts indicate that there is no difficulty in keeping a faculty young on the average, in spite of the fact that long tenures and life-service are the rule in well-managed universities.

It is of great importance that there should be a large body of young men on a university's staff who hold only annual appointments. In these places young men have the opportunity to prove their capacity as teachers and advanced students, and, on the other hand, the university by carefully observing the young men who hold annual appointments can select the most promising men to be instructors without limit of time. These selections ought in practice to be made by the departments in which the annually appointed instructors work, that is, by the body of professors, assistant professors, and instructors without limit of

time, who are members of a single department like history, mathematics, or physics. These persons really know the capacities and characters of the annual appointees; for they have become intimate with them as undergraduates, and they also see them at work as assistants and annually appointed instructors. It is impossible that the president or the board of trustees should know these young men; so that the authority and responsibility for the selection are best placed with the departments that have the necessary knowledge of the candidates.

In recruiting a university's staff, a long period of probation for all candidates, who rise from the ranks and advance gradually towards a full professorship, is necessary, and it is desirable that this long period of probation should cover the period within which marriage is probable. Marriage is quite as apt to affect either favorably or unfavorably the efficiency and general usefulness of a university teacher, as of professional and business men in any other line. It is a good deal safer to give a life

office to a married man on whom marriage has proved to have a good effect, than to a single man who may shortly be married with uncertain results.

An interesting question with regard to the recruiting of a faculty by calling proved men from other institutions to full professorships is the limit of age beyond which such calls are inexpedient. Opinions and practices differ widely in this matter; but general experience in several different nations seems to indicate that the most vigorous and productive period of a teacher's and investigator's life is from twenty-five to forty-five; although there are many cases in which a great student continues to develop after forty-five the corollaries or consequences of the principles which he conceived and first applied at a much earlier age. Accordingly, a university which calls to its service a man over forty-five takes the chance of getting a man of declining rather than of mounting efficiency. The same principle applies to university administrative officers. They should begin young, and attain their

highest rank while their mental and moral efficiency is still mounting. These rules are necessarily qualified by the fact that some exceptional men continue to exhibit mental elasticity and vigor unusually late in life. Nevertheless, a university which counts on such exceptions will run serious risks, and occasionally pay heavy penalties for venturesomeness in this respect. An institution eligible for Carnegie Foundation pensions can prudently invite rather older men to its service.

A competent faculty having been created on sound principles of selection and promotion, the question next to be discussed is what a faculty's functions ought to be. As good a definition as exists of the functions of a faculty is to be found in the Statutes of Harvard University, Section VI, in which it is stated that each of the Schools of the University is "under the immediate charge of a faculty." This phrase means in the practice of Harvard University that the several faculties have immediate charge of the requirements

for admission; of the courses of instruction provided; of the daily demands upon both teachers and students; of the times and seasons of university work during term-time; of the conditions on which degrees are conferred; and of the government of the students in all respects. Each faculty lays down the rules to which instructors and students must conform, and each faculty has power to define the penalties for infringement of these rules, and to apply them. In order to discharge these extensive functions, each faculty has a dean at its head, and a secretary, and is authorized to delegate any of its powers relating to ordinary matters of administration and discipline to standing committees which prepare its business, or act with full power on matters concerning which clear precedents have been firmly established. In institutions to which large numbers of students resort, and which offer instruction in great variety, a faculty tends to become a large body; and since large bodies are ill adapted for the discharge of administrative functions in detail, this power to

delegate its functions to administrative officers and boards, or committees, is essential to the efficiency of the faculty. A wise faculty will, however, keep in its own hands a firm control over its officers and committees, and will itself lay down all the general lines of educational policy.

From time to time questions of policy come before a faculty which obviously have a direct pecuniary bearing. Thus the raising of the terms of admission to any department of a university may affect the resort of students, and therefore the receipts from students, particularly in an institution which depends largely on tuition-fees. On such subjects the faculty should invariably send their recommendations to the board of trustees before publishing them, in order that the body responsible for the pecuniary welfare of the university should have opportunity to consider and approve, or disapprove, the proposed measures. All measures which affect the ordinary period of residence for a degree given by the university, or which make it more difficult, or

less difficult, to obtain a degree, are measures having pecuniary significance. So are proposals to add new branches of instruction, or to increase the amount of instruction offered in old departments, unless the faculty sees its way to procure more instruction without increasing the staff, and therefore the total amount of salaries. In general, new proposals which might affect strongly the serviceableness of a university, or the feeling towards it of its Alumni, the State, or the public at large, ought not to be put in force by a faculty without previous consultation with the trustees.

There is one matter of etiquette concerning the relations between a faculty and a board of trustees which has some importance with reference to a faculty's sense of responsibility, but is not always observed. An individual member of a faculty should not approach a member or members of the board of trustees with opinions of his own in opposition to an official opinion already conveyed to the trustees by the majority of the faculty to which

the professor belongs. If minority opinions existing within the faculty deserve or need to be expressed to the board of trustees, they should be forwarded by the faculty itself as minority opinions. In serious emergencies this rule admits of exceptions; but, in general, single members of a faculty should strictly observe it out of respect for the influence and authority of the faculty.

The large faculty of arts and sciences, large because of the multitude of subjects of instruction which it deals with, is necessarily subdivided into departments by subject, such as the classics, the modern languages, history, government, physics, geology, architecture, fine arts, and so forth. Within each department the interests of its members are homogeneous and accordant; and each department is naturally ambitious to enlarge its operations, and win more and more of the attention and time of an increasing number of students. The faculty should exercise a vigilant watchfulness over all its own departments, and endeavor to keep their development propor-

tionate and moderate, and should not allow any department to urge its needs and wishes directly on the board of trustees, at least until they have been examined and approved by the faculty. One of the standing committees of every faculty should be a committee on instruction, whose function is to examine and report on all propositions which come from departments concerning courses of instruction.

A very important function of a faculty is to determine the normal number of weekly exercises for which each registered student shall be responsible. This number is naturally different in different schools or divisions of the university, as, for instance, in the undergraduate schools on the one hand, and the graduate schools on the other. And, again, attendance on fifteen hours a week in one institution may not be a greater task than attendance on ten in another, everything depending on the standard of work by the student for each weekly appointment. The total labor of the student per week may be greater at one institution which requires at-

tendance at ten exercises a week than at another which requires attendance at fifteen. At each institution the faculty is the only competent body to determine the most expedient number of weekly exercises to be attended by each student; because it is the only body which can know what the standard of labor per exercise is within its own province.

It is for a faculty to determine what amount of control it will exercise over the methods of instruction adopted in its several departments, or by the professors, assistant professors, instructors, and tutors. As a rule, tutors and instructors are responsible in regard to their subjects and methods of teaching to their several departments, and the departments are responsible to the faculty. The freedom of a teacher to give instruction in just the method which suits him being very precious, a faculty cannot wisely interfere often with the teaching methods of individual teachers. Nevertheless, a faculty can properly criticise the results of any professor's, or other instructor's,

work as they appear in certain easily visible ways. Among such visible evidences are disorder in a professor's lecture-room; the resort of obviously incompetent or uninterested students to his courses; examination papers of a trivial or pedantic sort; uniform high grades or uniform low grades returned by the professor; an extraordinary number of distinctions earned in his courses; or an extraordinary number of rejections and failures. These are legitimate subjects of inquiry by a faculty committee or by faculty officials, and can be dealt with by a faculty without impairing just academic freedom. The knowledge that this power of revision resides in a faculty is a valuable control over individual eccentricities.

The faculties in some American universities exercise the power to nominate to the board of trustees new professors, the trustees as a rule accepting these nominations. This power of nomination has generally been acquired by custom, and does not rest upon any written law. The practice probably arose at a time when faculties were small, and its members

were intimately related one to another, and more interested in keeping the faculties strong than any other set of men connected with the institution. The trustees presumably met but seldom, and had no time to inquire into the claims and merits of different candidates. Moreover, when the range of college studies was small, and all members of the faculty had passed through the same curriculum in their youth, they were fair judges of the qualifications of candidates whose range of knowledge and intellectual interests was similar to their own.

The problem of selecting new members of a faculty is utterly different to-day. In a large university faculty of arts and sciences the members rarely feel competent to pass on the qualifications of candidates for election who do not belong to their own department, or to some closely allied department. Thus a professor of Latin, Sanskrit, or comparative literature, will ordinarily declare that he knows nothing about the qualifications of a candidate for a professorship of mathematics, geo-

logy, or chemistry; and all members of the faculty are conscious of this sort of ignorance on their own part. The official nomination by a faculty under such circumstances is a formality or a convention, and not a piece of real advice. The president of the university, the dean of one of its schools, or a committee of the trustees, when charged with the nomination of a professor, will naturally consult the professors of the department in which the vacancy is to be filled, and often the professors of allied departments, and will so obtain much more direct and valuable advice than the vote of a faculty could give. This function of nominating professors for election by the trustees is therefore not one to be recommended for the faculties of an expanding and hopeful institution. Other methods of selection already exist which work better in practice, and are theoretically sounder. The method was natural in a private-venture medical school, because the professors were there really partners in a business the proceeds of which they divided, and as such had a right to decide on

the admission of new members to the firm; but since all the best medical schools have been taken on by universities, this method of selecting professors has been modified or abandoned in the new medical faculties. The function is still sometimes exercised by a committee of all the full professors in a medical faculty, but is of doubtful expediency even when thus limited.

What is called discipline in an American university is ordinarily committed entirely to its several faculties. This discipline may vary in the different faculties of the same institution. In general, it is a government which uses no force except the force of public opinion; and this opinion is compounded of the opinion of the older scholars who are the teachers, and of the younger students who are the junior members of the university for the time being, with an admixture of the opinion of the graduates of the institution, which, though somewhat remote and infrequently appealed to, is yet felt by faculty and students alike as a real unofficial force of

a wholly disinterested character. The only penalties which a faculty uses, after warnings, reproofs, and exhortations, are temporary banishments, and in the last resort, final separation from the institution after all other measures have failed. These penalties are, however, highly effective, because of the universal recognition of the fact that membership in a college or university is a high privilege. From the long and varied experience of American colleges in trying to maintain a just and effective discipline, certain general rules or principles of administration have been evolved, the most important of which are as follows: No faculty, or official, should ever try to make a student, who is merely suspected of having taken part in an offence, incriminate himself. Students should never be required to testify against other students. When the guilty cannot be detected, there should be no wholesale punishment which involves the innocent. A student's statement about his own conduct should be accepted, unless it be inconsistent with known facts. No publicity

should be given to students' offences or defects, and the record of actual censures and punishments should be made as little condemnatory as truth permits. No information about disorders should ever be sought from any particular set of students, such as high scholars, recipients of money aids, church members, members of religious societies, students employed by the college, or students who in some natural and right way have become intimate with college officers. All college officials should bear constantly in mind the plain fact that most college offenders, even those who commit ordinary crimes, such as cheating and stealing, if considerately and mercifully dealt with, and if not ruined in body, recover themselves completely, and turn out to be honest men and good citizens. Since the influence of a college faculty is primarily a moral influence, it is indispensable that all its methods and rules in regard to violations of good order and right conduct should be straightforward, reasonable, and fair.

The functions of a State university faculty

differ somewhat from those of the faculty in an endowed institution which is not dependent on appropriations to be made by a legislature, because the State university faculty has a stronger sense of direct responsibility to its State and a keener desire to be of direct and visible service to the learned and scientific professions, popular education, the characteristic industries, and the public administration within its State. It will therefore take active part, through many of its members, in visiting secondary schools, holding short courses of elementary instruction at the university or at a distance from it, lecturing at teachers' institutes, women's clubs, grange meetings, and trade-associations, distributing through numerous short-term students superior seeds proved at the university, and working on State commissions which need the help of experts. Such useful functions as these the faculties of endowed universities in the East have been slow to assume. They have been inclined to reserve themselves for teaching and research at the seat of the university,

and to leave to others all sorts of "university extension" work. They are, however, improving in this respect, because they now realize that in a democratic society all institutions of higher education, whether endowed or supported from public revenues, are ultimately dependent on the public's appreciation of their services, direct and indirect, and on the resulting good-will of the whole community. Hence the growth at endowed institutions of summer schools in theology, medicine, and arts and sciences, of term-time classes for teachers in service, and of courses of popular lectures in divinity and medicine at times convenient for adults who are earning their livelihood; and hence also the increasing participation of university professors in various forms of public work.

Every faculty should keep careful records of the academic career and attainments of every student under its charge, and should found on these records its recommendations for the conferring of degrees, and of all other academic distinctions; and it should provide

for the preservation of these records, and their secure transmission from century to century. Very few American institutions have done their full duty in this respect; but the customs of the colleges and universities as to records and the proper use of them are improving.

Such being the functions of a faculty, how can they be best discharged? In the first place, by frequent stated meetings for examining the condition of its work, for hearing reports from its officers and committees, and for the consideration and discussion of proposals to improve its methods.

The rapidity and completeness with which methods of instruction and fields of instruction change from generation to generation, and even from decade to decade, is one of the most astonishing facts in the history of education. Thus there is not a single subject within the whole range of instruction at Harvard University, from the beginning of the undergraduate course to the end of the pro-

fessional courses, which is now taught in the same way in which it was taught forty years ago, or which offers the same field of instruction which it offered to the student of the last generation. All the methods and apparatus of teaching, and the spirit or temper of teacher and taught alike, have changed. Some of these profound changes begin in the faculties; but others begin outside the university in the working world, and must be discerned, appreciated, and adopted by the faculties; some are university inventions; but many are the consequences of social, industrial, and political changes in the outside world. Every faculty, therefore, has to keep up with the rapid march of educational events, and for this purpose it must have frequent stated meetings, and patient discussion of new proposals.

This necessity for the constant revision of educational plans, methods, and material penetrates, or should penetrate, to the work of every individual teacher in the university. A professor who reads year after year the same lectures is sure to become an incubus on his

department and his university. The young instructor who does not apply the experience of one year's teaching to vivify and improve the next year's is a bad candidate for promotion. So, in the agglomeration of university teachers called a faculty, if they meet but seldom, leaving to deans, secretaries, and committees all the routine work without demanding of them incessant improvements, receive from the members few new proposals, and do their best to avoid discussion of those few, it is certain that the institution in their charge will not grow or thrive, and will soon cease to play a leading part in the educational progress of the community or the nation. By the vitality, inventiveness, and enterprise of its faculty, it is safe to judge any institution of learning. Nothing can take the place of vitality in a faculty, no one-man power in a president or dean, no vigor and ambition in a board of trustees, and no affection or zeal in the graduates of the institution.

Faculty meetings serve several other purposes besides that of the promotion of educa-

tional improvements. In the first place, they greatly promote mutual acquaintance and good understanding among the teachers of a college or university. Good fellowship and a real intellectual intimacy among the teachers of a university are in themselves great objects. They create a good atmosphere for the intellectual life of the whole body of teachers and students. In faculty meetings the different qualities of the members who take part in the discussions are plainly revealed. The whole body learns that certain members are public-spirited, generous of time and labor, and co-operative, while other members exhibit the opposite qualities. Some members are seen to be clear, keen, and fair in debate, while others are obscure, dull, or unfair; some members are modest and retiring, and yet ready for service, while others are more forth-putting in talk, but not so serviceable; some are quick, ready, and fertile, while others are habitually slow to speak, and even tardy in debate, and yet sound and influential; some say little, but their opinions are weighty when expressed;

others talk much and often, and nevertheless are influential because inventive and suggestive. That the members of a faculty understand each others' dispositions and various capacities is often a great advantage in university crises or emergencies; that the president and the deans should have the opportunities which faculty meetings supply to become acquainted with the powers and characters of the different members of the university staff is of primary importance. In every large faculty the personal composition of its committees is of great importance; and no president, or nominating committee, can make up these committees judiciously, unless he has the opportunity which faculty meetings afford to become thoroughly acquainted with the mental and moral make-up of its different members. In faculty meetings, and in service on faculty committees, the men who have administrative capacity show their quality, and from that class deans and secretaries are best selected. It is hardly necessary to say that the president of a university should preside at the

meetings of all its faculties, and should give each faculty the advantage of the experience of all the others. A wise president will dread nothing so much as an inert and uninterested faculty.

There is no way to prevent a faculty of arts and sciences, or of medicine, or of applied science, from becoming a large body in a prosperous and serviceable university. Mere size brings with it difficulties for a body which is both deliberative and administrative. Moreover, large faculties imply numerous appointments of young men every year. It is, therefore, an interesting question how a large faculty may be subdivided into effective groups, each of which can prepare a certain part of the faculty's business for the faculty and the president. Within the last twenty years experience has shown the advantageous way of creating these effective subdivisions; and the increasing authority of these subdivisions, each within its legitimate sphere of action, is one of the great gains made of late years in American university organization.

Every large faculty should be divided into departments by subject, each department consisting of the teachers of that subject who are members of the faculty. Each department thus organized is, as has already been said, a body with homogeneous interests and kindred ambitions and hopes. They all know much about each other's work, and are good judges of the young men who, year after year, aspire to teach their subject in the university. As a group, they know how the interests of their subject may most effectively be promoted at the moment, and are therefore well qualified to urge the needs of their department on the faculty, the president, and the community. The older members of the department also know the young men who in former years exhibited interest in the work of the department while students, and what has become of them in after-life. They can bring the needs of the department before such of their former students as have succeeded in business, or in the professions, and can interest them better than anybody else in promoting the interests of

the department. They can discuss within the department the methods of instruction in use; the completeness or incompleteness of the series of courses offered by the department; the expediency of changing the series, whether by subtraction or addition; and the exchange of courses from time to time among members of the department. In the intimacy of departmental debates, the older men can inform the younger, and the younger the older.

Each department needs a chairman, and most large departments need also a secretary. The policy to be followed in selecting this chairman is a matter of grave consequence. In small colleges which had but one professor for each subject, it was natural that the single professor should always be treated as the head of his department; but in large colleges or universities which employ many teachers in a single department, the principle of seniority is a dangerous one for determining the selection of the chairmen of departments. The selection is best made from time to time either by the president, or by a faculty committee of

which the president is chairman. This committee may wisely treat department chairmanships as offices to be held only for four, five, or six years, unless, indeed, a department be too small to provide a series of good chairmen. On this principle the chairmen will not often be senior professors, and indeed will generally be junior professors, or assistant professors. In this way a considerable number of persons will, within twenty years, exercise the function of chairman of a department, and will be enlarged and improved by that exercise. Moreover, dangers from the domination of masterful personages will be reduced to a minimum under this system; while the advantages of a real leadership need not be lost.

To the departments will naturally fall the nomination of young men for annual appointments, and in this way they will exercise considerable power over the future of the university. The faculty and the president will always have to be on their guard against the urgencies of the departments, balancing one

claim against another, and watching to see that the development of the departments is proportionate to the importance of their respective subjects.

In the presentation of department business to the faculty, chairmen of departments often feel obliged to urge on the faculty the action which the department has taken by a majority vote, without revealing the existence of a strong minority opinion within the department. This natural, and, perhaps, inevitable practice enhances the importance of thoroughly discussing within the faculty every proposal which is brought before it. In such a discussion the minority view within a department can almost always be brought out, to the enlightenment of the faculty. A well-organized and active department will generally procure, outside of the official programmes of the faculty, various conferences, and public or private lectures by experts brought from without the university, which stimulate teachers and students alike, and add to the effectiveness of the department as a whole.

A department is also very likely to interest itself in some medium of stated publication for papers written by members of the department, or invited from scholars at other universities. These publications, if well managed, not only strengthen the department which produces them, but add to the prestige of the university as a whole. Again, it often happens that the group of teachers and students called a department takes a vigorous interest in adding to the resources of the university library on the departmental subject, and this is one of the most legitimate of all fields for departmental interest and labor. The books having been procured, the department interests itself in securing a separate reading-room for its own use. Thence arises a demand for a departmental building where its lecture-rooms, collections, and reading-room can all be brought together. The departmental organization is therefore likely to affect in the future, not only the internal, but also the external structure of the American universities. Since departments are inevitably com-

mittees of a faculty, and will always need faculty control, their increasing power and usefulness imply the increasing power and usefulness of the faculty out of which they are created.

IV

THE ELECTIVE SYSTEM

GREAT changes have come over the American college and university during the last forty years. The greatest change is the general introduction in larger or smaller measure of the elective system; and the next in importance is the change in methods of instruction. The present chapter deals with the nature, objects, and results of the elective system, and the following chapter with methods of instruction.

In the first place, the elective system is a system, — that is, a carefully arranged scheme of numerous courses of instruction which are open to the choice of students under rules partly artificial, but chiefly natural and inevitable. The elective system has been described by its opponents as a wide-open, miscellaneous bazaar, at which a bewildering variety of goods is offered to the purchaser, who is left

without guidance, and acts without any constant or sensible motive. Nothing could be farther from the facts than this description. An elective system presupposes a well-ordered series of consecutive courses in each large subject of instruction, such as Latin, German, history, or physics. The division of the courses of instruction into groups by subject is natural and easily intelligible. Within these groups the series of subjects is natural and plain, except for the unexplained gaps which often occur in the series, — gaps due to the inadequacy of the institution's resources.

In a strong university the subjects of instruction taken together ought to cover all fields of human knowledge in which it is possible to give systematic instruction; and in each subject the schedule of courses should be in the highest degree orderly and consecutive, rising from the elementary, comprehensive course, through courses of greater and greater difficulty, becoming more and more intensive, until the summit is reached in the conferences or seminaries which take advanced students

to the limits of knowledge in that subject. It is obvious that a university which undertakes thus to deal with all subjects of knowledge must offer a very large total of different courses, and that in a certain sense, therefore, the choice of the individual student has a large range; but it is equally obvious that in the list or schedule of courses in a given division or department of knowledge the choice of the individual student has strenuous limitations. Thus, the beginner must take the elementary course first, and he must then advance through the long schedule of the department by well-marked steps. He cannot choose an advanced course in any subject until he has laid the necessary foundation. No student is admitted to any course unless he has fulfilled all the requirements for that course, and the department announcements contain numerous prescriptions concerning the sequence of courses. He cannot take two courses which occur in the time-tables at the same hour; and the time-tables may be systematically used to prevent unwise

combinations of courses. In well-conducted institutions he cannot take an advanced course without the consent of the instructor, who must be satisfied that the student is well prepared to do the work which the instructor habitually demands. The elective system, then, is extensive and complex, but it is also orderly, well mapped, and thoroughly regulated.

The primary object of the elective system is to enable the serious student to select his studies in accordance with his tastes and capacities. He is enabled to select those studies which interest him, or those teachers who interest him, with the result that he works much harder than he would on subjects which do not interest him, makes more rapid progress, and arrives sooner at the satisfactory stage of real intellectual achievement. Any human being, whether child or adult, whether hand-worker or brain-worker, will always work harder and accomplish more in a task which interests him. The first effect, therefore, of the elective system on the individual student

who has intellectual ambition is always to get more work from him. It also makes him sooner a productive person, that is, a contributor to the sum of knowledge. This is the primary object of the elective system, — to make the serious student work hard, accomplish something worth while, and so win power and happiness. The complete development of the elective system takes place in the later years of instruction in arts and sciences, that is, in the school commonly called the Graduate School, because at the time of its institution it was the only school in the American university for admission to which a previous degree was required. Here the elective system has full scope, although the individual student in the Graduate School ordinarily chooses nothing but his line of work. On that line the steps of his progress are laid out for him; and his will coöperates in the limitations, for the intense specialization he desires prescribes the limitations.

But how is it with the college student who is not serious? There are such in most Amer-

ican colleges, although they form a much smaller proportion of the whole body than uneducated people generally believe. What use will he make of the broad range of optional subjects? What is the object of an elective system for him? He will tend to avoid advanced study, and make his selection therefore among the more elementary courses, in the hope that they will prove easier than the advanced courses, or more level to his intelligence. Among the elementary courses he will undoubtedly choose those which present most interest to his unawakened mind, and he will also diligently inquire for the inexperienced, less strict, or more soft-hearted instructors, in the hope that his shortcomings may by such men be gently dealt with. He will also study the time-tables, and avoid courses which are scheduled for too early morning hours or too late afternoon hours. In general he will select the courses which seem to him safest with a view to timely graduation, and to this end he will seek the advice of older students of his sort.

What will be the result of this mode of selecting his studies by a student without any intellectual ambition? His total course, or total selection of courses, will probably resemble the old prescribed course in the American college, that is, it will remain in the elements of all subjects; it will continue in college some of the subjects studied at school, because those are the subjects in which the youth has some acquired capital; and it will contain a greater variety of subjects than any ambitious student will include in his programme. It will be what is ordinarily called an "all-round" course. It will, however, be a course which will procure from the chooser more work than such a person would ever have done under a prescribed system; because in some degree it is selected on the ground of the mental interests of the individual, or on the ground of the attractive and influential personality of some teacher or teachers.

It would be difficult to overestimate the value of an elective system for the lowest quarter of a college class. It not only gets much

more work out of that quarter, but also offers them their only chance of experiencing an intellectual awakening while in college. By following, though almost unconsciously, their natural bent, such young men have the best chance of developing some power of application, and some desire for intellectual achievement. The object of the elective system for a student disposed to follow the line of least resistance is to give him a chance to get roused from his childish state of mind and will, and to feel stirring within him the motives of a considerate and fore-looking adult.

There is another class of students to whom an elective method is a great blessing, namely, the late-developing young men, and the young men whose minds are not quickened by any of the subjects usually taught in secondary schools. The old prescribed college curriculum, which was in the main a continuation of school subjects, rarely offered these men any new advantages or opportunities; but the wide-ranging elective system may easily give them entrance to fields in which they have

some chance to excel. Here, again, an elective system brings opportunity, and with it inspiration and hope.

It is another object of a broad elective system to mix the students of the different college classes together, and to mix graduates with undergraduates in the same course. Because of the great number of elective courses offered at any good college, it is quite impossible for any single student to pursue more than an insignificant fraction of them during his total residence at the college. It may easily be the interest of a student belonging to a higher college class to pursue with members of a lower class an elective course which he has not previously taken. Moreover, a graduate of the same college, or of some other college, may desire to take up, after he has obtained his first degree, some studies which he did not have time to enter upon during his college course, or had not felt the need of pursuing. In consequence, almost every course of instruction largely resorted to in colleges where the elective system is broad contains gradu-

ates, members of all the college classes, and special students all mixed together. When a scientific school makes part of the institution, some of the scientific courses will also be resorted to simultaneously by members of all the different classes. This mixing of students of different ages, and different academic status, is an unqualified advantage; provided that all are united in a common purpose to master the course they are attending together. The younger student from a lower class is stimulated by the older men with whom he associates, and if all the attendants are qualified to pursue the study to advantage, the older men suffer no harm.

When the Graduate School of Arts and Sciences was first established in Harvard University, in the spring of 1872, the adoption of rules determining the period of residence and the examinations for the higher degrees was accompanied by a vote opening all the elective courses of instruction in Harvard College to Bachelors of Arts of Harvard College, and of all other colleges. The reason for this vote

was that no undergraduate during his four years' course could take more than a fifth part of the instruction the College then offered; so that the student who had just received his Bachelor's degree might well find at least a year's work among those college electives which he could not pursue while an undergraduate. What was true of Harvard Bachelors of Arts was still more likely to be true of the recent graduates of other colleges. Thirty years later, the number of courses of instruction offered in Harvard College and the Graduate School had greatly increased; so that the correctness of the principle laid down by anticipation in 1872 has been abundantly demonstrated. Graduate and undergraduate students are to be found together in scores of the courses of instruction now offered by Harvard University, although there are also many advanced courses in which none but graduates appear. This grouping of older and younger students by subject is one distinct object of the elective system, although a subordinate one.

The grouping of students of various ages and various academic standing by their subjects of study has certain valuable social effects. It leads to intercourse among students based on like tastes and intellectual interests, particularly in elective courses which are chosen by a moderate or a small number of students. There is no better starting-point for a college friendship than sympathy in an intellectual pursuit, or than a common devotion to an interesting subject or an interesting teacher.

An excellent effect of the election of his own studies by each individual student is the added sense of responsibility which this freedom gives. A prescribed course alike for all leaves no freedom to the student in his studies, and imposes on him no responsibility. Here, as everywhere else, it is only under a régime of liberty that the individual can acquire the capacity for self-direction and self-control, and the sense of responsibility for his own conduct. A college in which a good elective system prevails furnishes instruction in great variety,

offers guidance and aid in the daily work of the student, and holds rigid examinations; but it throws the responsibility of selecting his fields of work on the student himself. Experience has shown that young Americans of the college age possess as a rule the intelligence and character to win mental and moral profit from this responsibility. To provide the occasion and the means for this great profit is one important object of an elective system.

It is perhaps unnecessary in these days to meet the unenlightened criticism which used to be made on the elective system, namely, that choice of studies for college youths must mean the gratification of a desire not to study at all. Experience has demonstrated that there is no foundation for this apprehension. An elective system does not mean liberty to do nothing. It allows every student to choose his subjects of study; but the amount of his work remains prescribed, and its quality is tested by means of periodical examinations, essays, laboratory work, and frequent conferences between teacher and student. Under a well-

administered elective system not only is a minimum of attainment prescribed, but there are numerous competitive inducements to strenuous study. As a method in education it has emphatically a moral as well as an intellectual end.

It is important to discriminate between the fundamental principle of freedom of choice and the administrative methods which exact from each student a reasonable amount of work, and estimate the quality of that work. The main principle being settled once for all, the administrative methods will be capable of indefinite improvement. Under election, as under prescription, it is an altogether separate question whether or not a college chooses to retain within its walls young men who do no work, or who will work only in their plays. Under an elective system, quite as well as under a prescribed system, a college may say that it does not care to keep young men who do not reach a certain minimum of attainment. That is a question of discipline, altogether apart from the question whether

studies should be elective or prescribed. A college with a wide range of elective studies may easily be the strictest of colleges with regard to the minimum attainment of its students. Six long-service teachers in Harvard College between 1850 and 1900 had close observation of the minimum attainment of students in Harvard College between the years 1849 and 1869 under a system almost completely prescribed; and since 1880 a prolonged period of observation of the minimum attainment of Harvard undergraduates under a system almost completely elective. Comparing the two minima, they all agreed that the latter minimum was unquestionably much higher than the former. This result, however, was obtained by applying during the later period to indifferent, lazy, and incompetent students a stricter supervision than was exercised over students from forty to sixty years ago. It is one of the great advantages of the elective system that the intelligent, self-directing, responsible student can have all the advantages of freedom, while the irresponsible, thoughtless,

or lazy student can be made to do some work, without driving him into studies for which he has no capacity and in which he feels no interest. The free choice of studies can prevail under a variety of disciplinary policies; it is compatible with a severe exclusion of idlers and dullards.

It is time to consider briefly some of the limits and bounds of the elective system. It is only in the Department of Arts and Sciences that an elective system has wide application. As soon as a young man has chosen his profession, his series of studies is prescribed to him in large measure. Every student in a professional school has, of course, chosen his profession and marked out his life-work; but it is only a small proportion of college students who know from the start what calling they are to follow. Many of the professions are now divided into specialties, each of which involves a peculiar training. Accordingly, in good professional schools there is a moderate application of the elective principle, designed to

enable young men to prepare for specialties in their profession. Thus, in engineering a young man may be sure that he is destined to be a mechanical, a civil, or an electrical engineer; and his professional studies may wisely be determined in some measure by the foreknowledge of this specialty. In a medical school, in the latter part of the course, the students ought to have a moderate range of elective studies, in order that they may begin while in the school the preparation for medical specialties.

In general, a college student who knows what his profession is to be will ordinarily find that some of his college studies are practically prescribed for him, because he feels the force of the advice to take certain preliminary studies. Thus, the young man destined to engineering will inevitably choose a large amount of mathematics and physics during his college course; and a young man who is destined for medicine will, if he follow good advice, study chemistry, physics, biology, French, and German on the way to his A. B. or S. B. The

student who has no clue to the profession he is to follow will be guided in his selection of college studies, if he is wise, by his individual tastes, inclinations, and capacities. If he follows this guidance, it will probably turn out, when he chooses his profession, that he has already taken in college subjects related to his future professional work; for the wise choice of the profession will be based upon the same consideration of his tastes and powers which determined his choice of college studies. In both kinds of choice, the wise chooser will rely on the same sort of guidance.

In a well-managed college competent advice is always offered to the newcomer in planning his own schedule of studies; but the main function of the adviser will be to interpret the printed announcements, time-tables, and regulations, and to show him how to lay out his own course with due regard to the fences of the elective system. Thus, for young men who have no purpose to be students, the minimum requirements for the degree afford guidance which they can disregard only at consid-

erable peril. For ambitious young men, the rules about degrees with distinction give clear and acceptable guidance. The rules for obtaining honors at graduation also afford guidance for students who desire to make a judicious specialization in their studies.

An example of this sort of guidance may be found in the rules about Honors in Literature in Harvard College. The requirements are as follows: A good reading knowledge of at least two languages, one ancient, one modern; an amount of reading in at least two literatures, one ancient, one modern, which shall be satisfactory to the Committee on Honors in Literature; an acquaintance with the general history of two literatures, one ancient, one modern, to be tested by an examination; a thorough study of two special subjects from two different literatures, one ancient, one modern. Such rules as these will give good guidance to any real student throughout his entire college course, not only in the selection of individual courses, but in the grouping of those he selects.

The largest effect of the elective system is that it makes scholarship possible, not only among undergraduates, but among graduate students and college teachers. While college curricula were prescribed, and therefore dealt almost entirely with the elements of the subjects taught, there was little in the work of a college teacher which stimulated him to broad and deep intellectual attainments. His college work became an absolute routine. Outside of the college he perhaps gave popular lectures, or compiled school and college textbooks, or preached, if a minister, as he often was. He but seldom became an advanced student or investigator; and when in rare cases he did become a real scholar, it was by force of innate genius impelling him to advanced work under most unfavorable conditions.

Since the elective system became the general practice of the American colleges and universities, so far as their resources have permitted, the whole aspect of the profession of teaching in the higher institutions of learning has changed. Even the young teachers

have received each a competent training in some specialty, while the assistant professors and professors are always chosen from men who have demonstrated their capacity for persistent, productive, scholarly work. A successful professor is an enthusiastic student, an inspiring teacher, and an indefatigable investigator. In all departments of scholarly work, such as modern languages, classics, oriental languages and literatures, history, economics, botany, and zoölogy, there now exist societies or associations which bring together statedly scholars in these specialties from all the universities and scientific establishments of the country. Fifty years ago, these societies for specialists were unknown. They are now numerous, and their number and strength mark the arrival of the American scholar, not as an accidental product outside of the teaching profession, but as a well-equipped professional man, systematically produced in and for the higher institutions of education.

It is difficult for the present generation to imagine the condition of the American col-

leges when there was no instruction given in any of them beyond the elementary courses in the few arts and sciences which led to the A. B. With few and narrow exceptions, no instruction in arts and sciences, that could possibly be called advanced, was given in the American colleges before the Civil War. Down to 1872 there was no systematic provision made at Harvard University for instruction in arts and sciences beyond the Senior year of the College. If any young man wanted to pursue the study of literature, history, philosophy, or science beyond the limit set by the requirements for the degree of Bachelor of Arts, he had to go to Europe. No other gain from the elective system can be compared with this development of scholarship in the United States.

In any college or university which undertakes to present a series of graded courses in all the common subjects of knowledge, election of studies in some large measure by the individual student, or selection for him, is absolutely inevitable; for no single student

can take in three or four years more than a small fraction of the instruction in the liberal arts offered at such an institution. But if election by the individual with the natural aids works well in practice, it is of course to be preferred to any method of selection for the individual by an authority outside himself, since freemen are best trained by practice in freedom with responsibility. Now, the experience of forty years in a great variety of American institutions has proved that election by the individual works well, wherever the administrative methods which should accompany such an elective system have been well devised and well executed. Hence, the system is not only inevitable, but in the highest degree expedient and profitable.

Inasmuch as Harvard University has a wider elective system than any other American institution, and has devised successful administrative methods in connection with the system, it is fair to use the experience there obtained as evidence of the superiority of election by the student over selection for the student by

faculty, administrative board, dean, or other authority. The results obtained at Harvard University may be conveniently discussed under six heads.

(1) The elective system permits the student to concentrate his work upon the subjects in which his capacity is greatest, and so to make rewarding progress in his chosen lines of study. This freedom for the student to specialize has the great incidental advantage of developing the advanced instruction in college, and such a development, limited only by the pecuniary resources of the institution, will result from every well-administered elective system, and cannot be obtained so promptly and completely under any other system. This specialization might conceivably be extreme, or too common, under free election. Has it proved so? Not at Harvard College. The ordinary college student does not wish to specialize to an extreme. The number of students in advanced courses at Harvard is small in all departments. The great body of the undergraduates frequent the elementary courses in

languages, mathematics, history, philosophy, economics, government, and the natural sciences, wishing to obtain initiatory surveys of many fields rather than a detailed knowledge of one. Twenty years ago, it was demonstrated that not more than 8% of the undergraduates in Harvard College wished to specialize their work to any high degree, and all subsequent experience tends the same way. It is only in the Graduate School of Arts and Sciences that any large percentage of the students tend to a high degree of specialization; and of course in such a school of mature students, specialization is wholly desirable.

(2) What does the experience at Harvard College show with regard to the wisdom of the choices made by students as regards continuity of study, or persistence in the same or kindred studies, from year to year? Critics of the elective system have often assumed that free choice of studies would generally result in a capricious selection of heterogeneous, elementary studies for trivial motives. This criticism is founded, not on observation of

the actual facts, but on a presupposition as to what American youth would be likely to do. What occurs may now be plainly seen by any competent person who will patiently examine the records of the students' choices at Harvard College during the last thirty-five years. Careful inspection of the records will satisfy any candid mind that the elective system does not produce the evil imagined; but, on the contrary, results in almost all cases in consistent plans of individual study throughout the college course. Inconsecutive or aimless selections are hard to find. More than twenty years ago, three experts, all familiar with the relations and sequences of the courses of instruction given during the period of 1881 to 1885, carefully examined the entire series of three hundred and fifty choices made by the students of that time, being the entire classes of 1884 and 1885 in Harvard College. They endeavored, independently of each other, to pick out those selections which, in their judgment, lacked coherency or consecutiveness. These three agreed upon only six cases of

incoherence — three in the class of '84, and three in the class of '85. Two out of the three experts — but not the same two in every instance — agreed on twenty-one cases within the two classes. When three experts cannot agree that a given selection of studies lacks coherency, it may well be that knowledge of the circumstances and conditions under which the individual selection was made would fully explain or indeed justify it. The general result of this particular examination was that incoherent choices were very few, and that the intelligence in selection was nearly as great in the lower half of a class as in the upper. This verdict would stand unchanged to-day, except that the recent gross exaggeration of athletic sports has added slightly to the number of incoherent or wrong-motived elections of studies.

When thousands of young men thus make for themselves judicious and coherent selections of lines of study which run through three or four years, it is plain that there must be some guiding principles, or demarcations,

natural or artificial, which avail to make free choice judicious in the main, and particularly to make it coherent. A just appreciation of these guiding principles is absolutely necessary to an understanding of the elective system. The purely natural guides are obvious and authoritative. The most thoughtless youth cannot help taking up a new subject at the beginning, and not in the middle. If he would continue a study which he has already pursued, he must take it up again at the point where he left off. He soon discovers that many subjects taught at a university cannot be advantageously studied without a previous knowledge of some other subject, or subjects. He perceives that every advanced course presupposes acquaintance with some elementary course, or courses, in the same department. He obeys the natural tendency to pursue a congenial subject, once entered on. To be sure, in order to render these natural guides effective, the Faculty must supply full information about the inevitable sequence of studies in each department, and the mutual depend-

ence of related courses. The giving of this information in clear and compact form is an important part of the administrative regulation which must accompany any successful elective system.

Students who, while in college, discover what their future profession is to be, have another natural guide through the intricacies of a wide elective system. They can, and do, select those college subjects which afford the best foundation for their future professional studies. It has already been pointed out that the rules concerning honors and degrees with distinction give a certain amount of artificial guidance towards effective groups of studies.

(3) It has been supposed that American students, when allowed to choose their studies, would simply inquire for the easiest courses, and take them. Such critics point to the courses which are selected by large numbers of students in any college with a wide elective system, and say these largely attended courses are all elementary, therefore they must be easy, and they are chosen because they are

easy. Neither part of this proposition is founded on fact. The elementary courses in a well-conducted college ought to be as well taught as any others, and ought not to be easy in any proper sense. They are chosen by large numbers because they relate to subjects concerning which almost all students want to know something. They represent in part the courses which used to make up the old prescribed curriculum in the American colleges, only they are now taught in a much more interesting and effective manner. They deal, indeed, with the inevitable subjects of the less advanced courses under any conceivable college system, prescribed or elective. In the languages and mathematics these courses carry on instruction from the more elementary stages already reached at school; in philosophy, political economy, history, and the natural sciences they are the necessary courses for beginners, that is, they are the only gates to the more advanced courses. They treat of topics full of interest for the general mass of the students. They are selected by college students who wish to

carry on the studies they have previously pursued, or to take up new subjects early in their college course in preparation for more advanced instruction in the later years. They are prudently selected by young men of limited capacity who cannot succeed in the more advanced courses. They also afford the most promising refuges for the few lazy students who exist, and will exist, under all college systems.

(4) In extending the elective system into secondary schools, and in introducing it into some colleges, a system called the group system has naturally come into use, because it is cheaper and easier to administer than a thoroughgoing elective system. A considerable show of options for the individual may be made by grouping a moderate number of studies in several different ways. Thus in a high school, nine or ten groups, bearing as many different names, can easily be made with from twenty to thirty different studies during a total school course of four years. Certain studies will appear in all the groups, though in varying proportions, while other studies

will appear only in three or four groups, and others in only one or two. This is an economical mode of producing an effect of large variety. There are, however, serious objections to the group system in schools, and still more in colleges. When, under a free elective system like that of Harvard, individuals exercise freely their spontaneous diversity of choice, it will appear in the end that no two individuals follow the same path through a course of four years. Out of hundreds or thousands of four-year selections, no two will be found to be exactly alike. This diversity corresponds to the infinite diversity of mind and character in the choosers. No two minds will spontaneously elect the same studies in the same proportions and in the same sequence. Minds left in freedom do not fall into nine or ten categories, or fit into artificial groups of studies arbitrarily compounded by some other mind. It is, moreover, quite unnecessary for some authority to prescribe these arbitrary groups of studies, inasmuch as all desirable concentration and continuity of work can be

secured without doing such violence to liberty of choice. The group system is also objectionable because it commits a schoolboy of fourteen, or a college student of eighteen, to a set of studies from which he will find it difficult to escape later in his course, however much he may wish to. There is no need of this early committal, either in high school or college. To impose upon a boy for several years an ill-fitting group of studies from which he can hardly extricate himself, is a much more serious matter than to allow him to choose amiss one or two studies which he can easily replace.

Again, the group system does not give every teacher the precious privilege enjoyed under a system of free election, the privilege of having no student in his class who has not chosen to be there. The group system forces a student who desires to study some of the subjects which compose a group to take the rest, in which he may have no such interest, and consequently it compels teachers to receive reluctant pupils.

Lastly, the group system, if enforced, com-

pels specialization in studies, a kind of compulsion which is peculiarly unwarrantable. If the student be permitted to cut across the groups — as often happens in practice — and so to make up his own course of study, the avowed objects of the group system will be defeated, and the school or college might as well have a free elective system within the limits which its resources impose. In short, the group system is only to be recommended as a temporary makeshift, while resources are narrow, or the raw material of a school or college is crude.

(5) An elective system leads to a great increase of intercourse between teachers and students for intellectual objects, and of spontaneous association for the same objects among the students. Conferences, clubs, and societies are maintained by young men who find themselves associated in the pursuit of the same, or kindred, studies, for the discussion of subjects connected with these studies. The pleasure and profit derived from these societies or clubs are much enhanced by the variety of

studies and intellectual interests found among the members of each society, alongside of the common study; for to the benefits and delights of intellectual companionship diversity of gifts and acquisitions contributes quite as much as community of interests. Every small elective course, every laboratory course, and every seminary or conference at Harvard is a focus of common intellectual interests, and the occasion of profitable personal relations between teachers and students.

(6) It has been a common criticism of the elective system that inasmuch as no two candidates for the degree of Bachelor of Arts will have pursued the same studies in the same proportions, the degree itself cannot have a definite, constant signification alike for all its recipients. Fortunately, it is quite true that the degree of Bachelor of Arts in the United States no longer means that the young men and women who hold it have passed through the same course of studies. Nevertheless, the possession of this degree testifies that the holder has enjoyed certain valuable privi-

leges, and made certain definite attainments. All Bachelors of Arts have spent from seven to ten years somewhere between the ages of thirteen and twenty-three in studies properly called liberal. At school they have all learnt the elements of Latin, and of some modern language besides English, the elements of mathematics, a little ancient history, and something of English literature; and in some foreign language, and in mathematics, they went somewhat beyond the bare elements. At Harvard College they have further spent three or four years upon a prescribed quantity of liberal studies, — all studies being accounted liberal which are pursued in the scientific spirit for truth's sake, and as means of intellectual discipline. The degree of Bachelor of Arts therefore remains the common goal of liberal study pursued through many years. In many institutions the degree of Bachelor of Science or Bachelor of Philosophy has a similar signification, except that the terms of admission to the course of study which leads to this degree have generally been lower than those to the

course which leads to the degree of Bachelor of Arts.

The objection — if it be an objection — that the A. B. has no definite and uniform signification applies with much more force to the higher degrees of Master of Arts or Science and Doctor of Philosophy or Science. No one of these degrees has any definite signification in regard to subjects of study or specific achievements.

It will now be obvious that the advantages of an elective system in a college cannot be reaped, unless choice of studies is wide open to the student for at least three years. Any college which keeps the curricula for the Freshman and Sophomore years mainly prescribed, and allows free election only in the Junior and Senior years, must fail to train advanced students except in those subjects which are well pursued for long periods in secondary schools as well as in colleges; as, for instance, in Latin, Greek, mathematics, English, and history. A college student in any single department like chemistry, zoölogy, philosophy,

or economics, who begins his study of that subject not far from its elements, must, nevertheless, follow a sequence of courses through the successive half-years of his college course. Thus, for example, he cannot attack the subject of quantitative analysis until he has studied general chemistry and qualitative analysis. For developing this sequence properly, he needs several half-years. If he has but two years in all to give to the subject, a proper sequence will not bring him near the top of his subject.

In the period from 1870 to 1890 — the period of the rapid development of the elective system at Harvard College — a long time elapsed before the faculty thought it possible to admit Freshmen to the elementary classes in economics and philosophy. Freshmen were not considered mature enough for these studies. Accordingly, the students who were attracted towards these subjects found themselves compelled to begin them in the Sophomore or even in the Junior year. Yet the advanced courses could not be attacked

until the long elementary course had been mastered. Experience of the difficulty of producing advanced students of these subjects under such conditions within the period of college residence, finally led the faculty to risk abandoning its theory that a young American of nineteen was not prepared to grapple with either of these subjects. By trial they made the encouraging discovery that some Freshmen are more mature than some Seniors. In general, an elective system limited to two years will fail to develop advanced teachers, as well as advanced students, unless, indeed, they can expand and continue their college teachings in a graduate school. Nothing can replace for a teacher the inspiration and incitement of training a few genuine advanced students, who become his devoted disciples and the diffusers of his doctrines. The attention of faculties and the public has been too often concentrated on the effects of the elective system on young students; whereas its effects on teachers, and on the development of real scholarship throughout the coun-

try, ought to have received more attention; for it is there that its effects have been the most beneficent.

The expediency, and even necessity, of a broad elective system in colleges will be seen clearly by all those who consider the great variety of professional studies for which a modern college prepares its graduates. In a properly constituted university, all the professional schools will prescribe for admission a preliminary degree, such, for instance, as the degree of Bachelor of Arts or Bachelor of Science. Now these university professional schools divide among them the whole field of knowledge, each taking so large a region that further subdivision becomes necessary in order to meet the wants of the young men who purpose to practice professional specialties. It is perfectly understood that under each professional course of study lie certain college studies which are peculiarly appropriate to that professional course, — as, for instance, mathematics and physics in preparation for a professional course in engineering; chemistry,

physics, and biology as preliminary to the study of medicine; and Latin, Greek, Hebrew, and philosophy as preliminary to the appropriate studies of a divinity school. When, therefore, the American universities come to be properly organized, with their professional departments on top of their colleges and scientific schools, and are therefore closed to young men who have had no college or scientific school training, the expediency and necessity of free election of studies in college will be amply demonstrated.

Looking back on the development of the elective system in the American colleges and universities during the past thirty years, one sees that the rate of the development and the width of the resulting system in each case has been in the main a question of the pecuniary resources of the institution. There is no doubt that a prescribed system is indefinitely cheaper than an elective system; for with only one curriculum of elementary courses to provide, a college can get along with a comparatively small number of inferior teachers. A broad

elective system requires many teachers of high quality; a prescribed curriculum needs only a few teachers, and those need not be advanced students or investigators. A professor who gives half his time to advanced work with classes of five to fifteen students is a far more costly article than a professor who deals only with classes of fifty to two hundred students. Nevertheless, the great increase in number and merit of the teaching staff in American universities of late years is not all due to the development of the elective system. A significant part of the increased expense for salaries is due to the increased amount of individual instruction given to students by experts in their several subjects. It is unnecessary to say that although this increased cost has hindered many institutions in the process of developing a wide elective system, the money thus spent is the most productive of all educational expenditures.

Finally, the permanence of the elective system is assured by the demonstrated fact that it provides on a large scale an invaluable

addition to human freedom, and provides this precious freedom for the most highly trained, and therefore the most productive and influential, persons. When the student of history reviews the great achievements of the human race, he comes to the conclusion that those achievements which have brought deliverance from some form of terror or oppression, or have been gains for some sort of freedom, have proved to be institutionally the most durable achievements, — one might almost say the only durable.

V

METHODS OF INSTRUCTION

METHODS of university instruction have changed almost completely within fifty years. The method of recitation from a book is almost extinct, except in language instruction; the lecture method, after being greatly expanded, has been subsequently reduced quantitatively, and much changed in quality; the laboratory method with its congeners has been introduced, and now occupies a large part of the field; and the demand made on the student for written work of many sorts — themes, note-books, problems, reports, and theses — has become incessant. Fifty years ago, the university teacher at the end of the hour gave out a lesson in a text-book — so many pages — and expected his class to recite that lesson to him at the next meeting. Fifteen or twenty students would take part in this recitation, which was in the main an exercise of the

memory. The student recited a bit of the book; the teacher ordinarily made no comment whatever on a good recitation, confining himself to efforts to extract some fragments of the text from the incompetent or neglectful members of the class. The good students could of course derive no profit whatever from such an exercise, except practice in making a brief statement from memory before the class. The poor students made public exhibition of their insufficiency; but were seldom either mortified or stimulated thereby, for experience taught them that the consequences of habitual failure in recitations were not serious — they remained in college, if they were regular in attendance on prescribed exercises, both secular and religious.

Fifty years ago, the lectures were few in number, and were not supported, as lectures are to-day, by lantern-slide illustrations, and by combination with note-taking, prescribed reading, quizzes, and examinations. The lecture courses were short, and lay outside the main system. They were, however, oases of intellectual interest in a thirsty land. In those days

there were no laboratories open to college undergraduates; so that the individualistic teaching of students in laboratories, now so common, was then unknown except in a few embryonic scientific schools.

The prime object of university methods of teaching to-day is to make the individual student think, and do something himself, and not merely to take in and remember other people's thoughts; to induce the student to do some thinking and acting on his own account, and not merely to hear or read about other people's doings. Bearing this main object in mind, the student of educational administration will review with interest the various methods of instruction now in use.

The recitation still persists and will persist in the language departments of a university. In a recitation the student can be called upon to translate the foreign language into English, to comment on the text, and to translate English into the foreign language. He can read aloud in the foreign language, and write it from dictation. These are all acts indispensable to

his acquiring the language; and, on the whole, experience has shown that these activities on the student's part are the most helpful processes in acquiring any new language. To that end the recitation is the most profitable exercise which has been invented. Experience has proved, however, that for the individual student the recitation is advantageous in direct proportion to the fewness of the students who take part in it. It requires a very skilful and energetic teacher to make a language recitation profitable for a class numbering more than thirty or thirty-five students. Twenty to twenty-five members is a wiser limit for the average teacher.

Beyond the language departments the usefulness of the recitation in universities is rather limited. It can be used in small proportion in connection with large lecture courses, and is there often called the quiz; and it may also be applied in a rather different form in those elementary subjects which require drill on problems or applications, as, for instance, in mathematics, and parts of physics, and in

formal logic. Such use of the reciting method for drilling students together in problem-solving is facilitated by the provision of large blackboard areas in the rooms used. Every member of a section or class can then be kept at work for a considerable portion of the hour, and yet the whole class will see the solutions of a large part of the problems given out.

In some university departments the lecture became the principal means of instruction as the recitation was abandoned; but it was the unaided lecture in the least commendable forms. Thus in teaching law the professors gave series of lectures which constituted treatises on the several branches of the law, and gave the same lectures year after year. They referred students to cases, but the attitude of the student was purely receptive; the student took no part in the exercise, he was merely listening and taking notes; and no pains were taken to make sure that he mastered, or even looked at, the cases referred to. When the law professor had published a series of treatises, his lectures often

degenerated into running comment on his printed books.

In medicine, the pure lecture, without illustration, prevailed to an astonishing extent. Even the clinical teaching was given largely by lectures of a descriptive or expository kind, often without simultaneous exhibition of specimens or pictures. In the Harvard Medical School of fifty years ago, there was no laboratory open to students except the disorderly and dirty dissecting-room; but for nearly four months of the year there were five consecutive lectures — humorously called didactic lectures — on as many different subjects every morning during the week. To be sure, medical education had another side which saved it from habitual failure, — the observation work in hospitals and dispensaries, and the memory work on manuals and dictionaries of medicine and surgery.

In the arts and sciences, lectures during the first half of the period under consideration — the past fifty years — gradually displaced the recitation, the lecturers relying on periodic

examinations to test the industry of the students and their own success; but gradually the university faculties became convinced that the plain lecture, without carefully organized aids, was an unsuccessful method of teaching, because it left the student in a passive and inactive condition, and procured from him no output, except spasmodic efforts of memory just before the periodic examinations. The last twenty years have seen a great reduction in the number of lectures, and the invention of various supplements to the work of the lecturer, and of requirements accompanying attendance at lectures.

The first of these supplements is prescribed reading. This reading is of various kinds and degrees in different subjects, and under different professors. Sometimes it consists of a series of books used thoroughly one at a time; sometimes of three or four books to be used simultaneously, though in parts only; sometimes of a long list of books from which the student may make his own selections, or to which the lecturer will make specific refer-

ences from day to day. The selection of this reading matter is an important part of the professor's function. If he recommends only a few books, the student may reasonably be expected to buy them; but if he recommends many, ownership on the part of the student is impossible, and it becomes the business of the university library or of the department's library to supply them. This involves large expenditures for books on the part of the university, if the number of students in the courses concerned be large. The library must be enabled to provide many copies of books often referred to; and to keep accessible in the reading-rooms thousands of books which are not allowed to leave the library, and are therefore called reserved books. At many American universities arrangements of this sort have been successfully made, and are in good working order.

The books having been selected and made accessible, how shall the lecturer know that his students make use of them; and how can he ascertain at the same time whether his stu-

dents are absorbing what he says to them, and reflecting on it? To accomplish these objects, two methods are in use, — periodical written examinations, and frequent oral or partly oral conferences or recitations conducted by assistants.

Written examinations lasting one, two, or three hours are held at intervals of about two months or oftener. If four examinations are held during the year, two of them may be three-hour examinations, and the other two one-hour. This method is open to the objection that the students may work hard only spasmodically, namely, shortly before each examination; the rest of the time they may be in a passive condition, more or less entertained and interested, perhaps, but not using their own minds actively on the subject. The method is good enough for courses of instruction which are intended to be only introductions to a thorough survey, or outline sketches of a great subject for persons who may, or may not, propose a systematic and thorough study of it. There is wholesome use in a uni-

versity for courses of that nature; but they do not make part of its most serious and productive work.

In order to enforce regular work on his lectures and on the prescribed reading of his course, the professor may relinquish one period out of his three a week, or one period out of his six a fortnight, and devote that hour to a wholly different kind of exercise, placing this exercise in the charge of a younger and less experienced man, who holds the rank of instructor or assistant. If the class be a large one,—several hundreds,—it should be divided into sections containing not more than twenty-five to thirty members. The exercise should be conducted as a recitation on the lectures and reading of the week, or fortnight, just elapsed; or the hour may be divided into two parts, the first fifteen or twenty minutes being devoted to writing answers to a single question placed before the whole section, and the rest of the period to oral recitation or discussion. A skilful and alert instructor can sometimes use the whole hour profitably for

active discussion with the students before him, — discussion in which the students themselves take the major part. If a portion of the hour be given to writing, the papers written should be corrected and graded by the instructor. The exercise should always afford the means of ascertaining whether each student in the course has been attending to the subject during the past week, or fortnight, and of marking or grading his work.

In largely attended courses one instructor or assistant can deal effectively with two or three sections, but if there are hundreds of students in the course, several instructors or assistants will be required. These men ought always to be selected with care by the department, on nomination of the professor most nearly concerned with the course. They should always be advanced students of the subject, and holders of one or more of the higher degrees of the university they serve, or of some other university. On their attainments and personal quality will depend in good measure the effectiveness of the course in which they

work, and the success of the professor. If several assistants have to be employed, the professor should meet them each week, or each fortnight, as the case may be, to agree with them on the questions they shall put to their several sections for answer in writing, to inquire into the progress of the several sections, and to make the work of the instructors accordant as regards method and rate of progress, and just as regards grades or marks. In a course of moderate size which needs only one assistant, greater liberty can be given to the one helper than is prudent in a large course divided into many sections with several assistants. In the latter case the professor should make every effort to procure a harmonious result for all the different sections.

The work done by assistants in large university courses is, as a rule, highly profitable to them, particularly if they are proposing to become teachers themselves. They are brought into intimate association with an expert professor, who has a strong interest in guiding them towards an effective method of teaching

for their own use, and who imparts to them in the process the best results of his own experience. As a matter of fact, to serve as an assistant to a successful professor in a university course is the best thing a young scholar can do towards getting a good position for himself. It is therefore possible to procure competent assistants for this important work who will serve for two or three years; but every department must take thought for a steady supply of such helpers. The function is not fit for capable and ambitious men beyond a moderate number of years. If it were made a long-period function, the right sort of young scholar would not accept it.

The great change in methods of university teaching during the last fifty years is the introduction of laboratory teaching in the sciences, pure and applied. So long as these subjects were taught by means of books and lectures more or less illustrated, the student got from them a training similar to that he obtained from the study of languages, history, and philosophy. They trained his memory for facts

and his powers of comparison, discrimination, and classification; but when, between forty and fifty years ago, laboratory work for the individual student was introduced on a large scale, first in chemistry and physics, then in natural history, and later in a large variety of medical subjects, a new day dawned for the teaching of all the liberal arts and sciences, and for a great deal of professional teaching. In laboratory work the individual student is obliged to use actively and accurately his own eyes and hands, to record correctly the results of his observations, and to apprehend the general principle or law which determines the sequences of the phenomena he observes. In any given experiment he may be dealing with a multiplicity of details; but he must take account of the coördinating or classifying principle which runs through all the details. In the laboratory he is himself at work with body and mind, and he is at work by himself, though under the guidance of an instructor, not much older than himself, perhaps, but more experienced, and fully capable of guid-

ing intelligently the work of the comparative novice.

In well-conducted laboratory courses of instruction, a remarkable combination is made of all available methods to induce the student to think actively and apply himself vigorously. Such courses often use one after the other the short illustrated lecture, note-taking at the lecture, individual work at a laboratory counter, note-making with drawings and written descriptions during the experiments, problem-solving on matters connected with the experimentation, and the periodical quiz or oral examination. On the other hand, many laboratory courses make little account of periodical examinations in writing; because the daily testing of the student's acquaintance with the subject is so prompt and efficient, and the results of the work he does in the laboratory indicate so clearly his attainments, that examinations in writing covering the work of two months or more are relatively unimportant. The lecture as a part of a course of instruction which depends chiefly on laboratory work may

be either long or short, either illustrated or not illustrated, although it is generally illustrated. Note-taking at the lecture may be either required or prohibited. It is often prohibited at short demonstrations given to small groups of students placed close about the demonstrator's table, when the object of the demonstration is to show what the students are themselves to do in the laboratory during their next period of work.

When hour-long lectures intended to bring out relationships, principles, or laws, make part of a laboratory course, the notes taken at the lectures are ordinarily supplemented in the laboratory by a manual which describes tools, processes, and methods of work so fully that the student need waste no time and run no unnecessary risks. In such subjects as anatomy, botany, and mineralogy, considerable quantities of material can be issued to each student for careful examination and description, and at the end of two or three hours of such study a short quiz or oral examination may be used to advantage with a group of

students who have been examining similar, but not the same, material. The making of notes of experiments during the actual experimenting is an invaluable exercise in accuracy and order, and in adequacy of description. In some courses the notes of each student at each exercise are made upon uniform sheets of paper arranged for subsequent binding, and these sheets are not allowed to be taken out of the laboratory. In a natural history subject, each sheet will ordinarily contain a drawing or drawings, and written descriptions, presumably drawings and descriptions of what the student has seen through his microscope. These sheets, dated and signed, are preserved in the laboratory for each student to the end of the course, and may then be bound as a record of the student's work within the laboratory. In other courses the notes are kept in plain note-books which may be taken out of the laboratory for inserting computations which the experimenter cannot stop to make while in the laboratory, or for writing out the conclusions, or inferences, which the

data experimentally obtained warrant. The laboratory notes, however made, are always open to the inspection of the assistant in the course, and supply one means of estimating the value of the students' work.

There is a danger to be guarded against in all laboratory instruction which has been highly systematized, the danger that the student may follow processes described in a good manual without ever reflecting on the reasons for the processes. The student's own work is then reduced to a mechanical following of directions. His inquiry constantly is, am I getting the reactions or phenomena which the manual says I ought to get? A student who works in this way will be entirely helpless without his manual, and will lose the training in reasoning which his course ought to supply. Laboratory assistants need to be constantly on their guard against this mechanical, unreflecting way of working on the part of students they direct. It is often necessary to tell beginners what they ought to see, or might see, under the existing conditions; but it is never safe to

allow the student to rest satisfied with verifying the assistant's or the book's statement. The student who goes through a well-devised laboratory course can hardly fail to gain some advantage from the obligatory accuracy in seeing, touching, measuring, weighing, drawing, and describing; but it is quite possible that a student whose experimental results are satisfactory should nevertheless miss altogether the training in scientific reasoning which the subject is fitted to impart. To prevent such shortcomings, the assistant should always be on the alert, and the professor responsible for the course should exercise an active supervision over the instruction which his assistants give at the laboratory tables.

In many laboratory courses it is advisable to supplement the lectures of the professor from time to time by short lectures given to sections of the class by the assistant or assistants. Part of the hour, occasionally devoted to this supplementary lecture on difficulties or details, may be advantageously devoted to answering in writing a question set before the

whole section. These short written quizzes can be best directed to ascertaining whether the reasoning of the subject has been apprehended by the class. Precautions against superficial or mechanical work are most valuable in the comparatively elementary courses resorted to by large numbers of students. In the advanced courses where the numbers are small, and most of the members of any class are persons bent on the serious pursuit of the subject they have chosen, these methods of control are hardly needed, or at least may be used much less frequently.

Problem work is an important aid in many laboratory courses. Typewritten or printed problems in considerable variety are given out to a whole class for immediate solution in the room where they are issued, the problems being of course closely connected with the work done in the course during the preceding three or four weeks. The written work thus obtained will enable the professor and his assistants to judge whether the instruction given to the class has been understood and assimi-

lated in fair measure; and at the same time it will give good students a certain confidence in their own attainments, and reveal to incompetent students the nature, and perhaps the cause, of their deficiencies. In every well-conducted laboratory course, however, far the greater part of the students' time and strength should be devoted to the laboratory work, including the making of full descriptive notes. Lectures, quizzes oral or written, problem working, and the study of the manual should all take a secondary place. The main object in view should always be the training of the students' senses, imagination, and reasoning power in actual experimentation.

The principles of laboratory instruction are available in many other university departments besides those ordinarily called scientific. Thus in the study of the fine arts, drawing and the careful study of objects or specimens should have a great part. In the study of architecture and landscape architecture, the draughting-room plays the part of the laboratory in chemistry or physics. In engineering, mining, and

forestry, the student obtains in his field-work much of the same sort of training which the student of botany, zoölogy, histology, or bacteriology gets in his laboratory. This is the reason that all universities are giving so much more attention than they formerly did to field studies for engineers in surveying, geodesy, and geography, to actual work in mines and metallurgical establishments for men who propose to be mining engineers, and to work in woods and lumber camps for men who propose to be foresters. This is the reason that universities are providing and carrying on summer camps for the actual conducting by students of the out-of-door processes of these various industries. Young men cannot be initiated into these professions by the use of books, models, drawings, photographs, and lantern-slides alone. They must have the training of actual labor in the real laboratories of these industrial processes. To reading they must add doing in their own persons. The student of these subjects must combine study of theory with practice; and he must be personally

familiar with the best applications of the soundest theories. It is this combination of theoretical and historical knowledge with practical skill which in these days makes the successful investigator, professional man, or business man. In his training neither the theoretical part nor the practical part can be safely omitted.

A method of instruction has come into use in many university departments which was imported from Germany, or adapted from the work done there for the degree of Doctor of Philosophy, namely, the thesis, or long written paper on a subject assigned by the professor, or selected by the student in consultation with the professor. The thesis in its original sense is used here without much change as one of the qualifying tests for the degree of Doctor of Philosophy, except that in American practice the thesis tends to surpass in length and elaborateness the German original; but as an element in undergraduate work the thesis has been shortened and has lost its character of an original contribution to learning. It has

become rather a report on some limited subject which the student can be supposed to make by a process of summarizing and digesting his reading on a given theme. It is now often used as a means of ascertaining that the student has really read the books prescribed to him. When thus used, the best way of obtaining a satisfactory thesis is to require the student to present to the professor or his assistant several weeks before the thesis is due, and after he has accomplished the reading prescribed, a brief of his proposed thesis in duplicate. The professor or his assistant should go over this brief with the student, listening to the student's explanation of the manner in which he proposes to fill out the brief. One copy of the brief should then be left with the professor or assistant in charge. The thesis should then be handed in punctually on the day appointed, and should never be accepted at all on any later day. The evils of postponed written work are very great, so that the presentation of written work at the appointed time should be rigidly enforced. Care should

also be taken that the theses demanded of the same student by different departments be properly distributed throughout the year; so that there may be no unreasonable demand for written work in any one part of the year. Thesis work can be made analogous to problem work in some departments,—as, for instance, in physics, by converting the thesis into a report on some critical investigation or famous experiment, or in economics by converting the thesis into a report upon some special industrial or financial problem which has been solved in practice, or is in process of solution.

All this written work gives the student who does it thoroughly, excellent practice in accumulating and sorting materials for discussion, summarizing arguments, and describing clearly complicated proceedings; and inasmuch as facility in such work is often highly useful to its possessor in after-life, much is to be said in defense or advocacy of the thesis. On the other hand, the thesis often raises grave questions in the minds of both student

and instructor as to the degree of independent labor which it represents, or rather as to the amount of copied and quoted matter which it may properly contain. The same difficulties, however, occur in after-life whenever a writer tries to give a new account of transactions or processes not of his discovery or invention, the materials for his description being already in print.

One of the most valuable methods of university instruction which has been developed within the last thirty-five years is the so-called case method of teaching law, a method invented about 1871 by the late Professor C. C. Langdell of the Harvard Law School, and developed by himself and his colleagues in that School in the course of about fifteen years. Professor Langdell's fundamental idea was that the law should be taught, not from treatises or from lectures which would probably be either imperfect treatises or commentaries on treatises, but at first hand from the records of actual cases in which important principles or practices had been laid down

and established by judicial tribunals. He began by teaching the subject of contracts through a selection of leading cases, to which he referred his students as the raw material of their studies. When his students had read the cases on a given topic, to which he had referred them, he discussed with them the facts of each case, and the principle or doctrine established therein. The students were expected to state from memory the facts of the case, and to give a summary of the arguments, and of the decision of the judge. Professor Langdell took part in and guided the discussion by both questions and answers of his own; but the class did the larger part of the work during the lecture hour. It soon appeared that it was highly inconvenient for the many students to get timely access to the few copies of the reports to which Professor Langdell referred them, and he therefore undertook the preparation of a collection of select cases on contracts. This selection was followed in a few years by a series of volumes of select cases on the subjects of instruction

in the Harvard Law School, almost all of which were prepared by Professor Langdell's colleagues; and his method was gradually adopted by most of the teachers in the School. The possession of these volumes of cases makes it unnecessary for the student to resort incessantly to the volumes of reports on the library shelves, unless the professors revise their selections of cases, or wish to add cases of a date later than that of the volumes in use. With this method there is no lecturing in the ordinary sense; there is active discussion on the statement of the cases as made by the students, a discussion in which the professor and many students take part. The better students like to be called upon to state the main features of a case, and like to discuss them when stated. Not all the students of a given class take part; but the Socratic process is more interesting to a mere listener than a lecture, and more impressive. The method requires an unusual degree of alertness and vivacity on the part of the professor in putting questions and keeping the discussion to

the point, and skill on his part in making a quick and concise résumé of the discussion for the benefit of the whole class. It is, on the whole, a more fatiguing operation for the professor than that of lecturing; because he is obliged to give the keenest attention to all the inquiries and suggestions of the eager students before him. He must also see that the time is divided proportionately among the different topics which he intends to have covered during the hour.

The method was much derided at the start by lawyers who had been brought up on treatises and commentaries on treatises; but it soon justified itself in a conclusive way. After a few years it was demonstrated that young men who had been thus trained to the practice of the law could make themselves more useful to their seniors in the offices they entered than fresh law graduates had ever been before, and than young men contemporaneously trained in other methods. There followed a rapid growth of the Harvard Law School which has continued to this day, in

spite of numerous restrictive measures which demanded better preparation for admission, more years of residence, and finally a preliminary degree in arts or science as a condition of entrance to the School.

The method has now spread to many other law schools, and to other departments of American universities — to the latter with interesting modifications. It is directly applicable to the study of constitutional law, and in large measure to the study of diplomacy, because collections of original documents can be made for the study of these subjects which are analogous to the case-books used in the study of legal subjects. In economics also the method is applicable, with only slight modifications. Thus, the century-long warfare between capital and labor can be profitably studied from a collection of reports on the most important lockouts and strikes of the period, condensed and summarized if need be. The successive gains made by the trade unions, the good and evil they have done, the defences set up by capital, and the inven-

tions made by capital to meet the new conditions of the labor market, can all be brought home to the student vividly and impressively through the reports of the actual conflicts, without the use of any treatise, or history, or of any theoretical statement of doctrine on the subject.

One of the most interesting applications of the case method in other departments occurs in clinical medicine, a department where the ordinary method has been to show the students, gathered about the patient, how the history of the case has been obtained by the physician and the nurse, how the symptoms have been studied and recorded, and how the just diagnosis, treatment, and prognosis are to be arrived at. This lesson is given on or near the patient in a hospital, dispensary, or out-patient department. To supplement this instruction given over sick or injured persons, a case-book has been contrived in which a large number of cases are described, with all the records used by the physician making a hospital visit, and with the results of thor-

ough examination of the patient. From this printed report of the case, the student is expected to make his own diagnosis, to prescribe the proper treatment, and to make the prognosis. It is evident that this method can be profitably used with regard to a great variety of diseases and injuries; so that the student shall find in such a case-book means of reviewing his knowledge, and of testing his capacity to deal with actual cases. This is a combination of the case-book in the law with a book of problems in geometry, or physics, or economic geology.

Useful modifications of the case-book are the source-books which are now found useful in university departments of history, philosophy, and public finance. These books are of course various in character according to their subjects; but the fundamental idea is that of Professor Langdell's book of cases. They are intended to put at the disposition of the student documents which have proved to be of fundamental importance, summaries of life-careers which were extraordinarily influential,

or extracts from great authors which contain the substance of their teachings, or the seeds of later growths. Books of this nature can be profitably used either to supplement lectures, that is, as parts of prescribed reading, or to supply the themes of oral discussions which replace lectures.

Finally, university examinations have been greatly improved and systematized within the last fifty years, and have become a highly profitable part of university discipline. American experience on this subject is brief compared with English. The first written examinations ever held in Harvard University were introduced there in the year 1857 by two young tutors in mathematics. The written examination has since been studied from every possible point of view, and adopted in all departments of university work. They are much more than means of grading students and compelling the indifferent or careless student to do some work; they constitute a valuable means of training, inasmuch as they prepare young men to meet the similar crises which they

constantly encounter in after-life, particularly in the professions, — both learned and scientific, — in the public service, and in business administration.

The professional man is constantly brought to tests much severer than any university examination can ever be. The lawyer must prepare himself, often under great difficulties, to plead his case on a given day. The physician may find himself called at any moment to a sick or injured person, whose real condition he must discover as soon as possible, and must treat forthwith. He must also decide what to say to the patient, and to the patient's friends and relatives. He needs to have at his fingers' ends all the knowledge and skill applicable to the case in hand, and he needs it on a sudden. The architect finds it to his interest to present within a few weeks a design for a kind of structure which is not familiar to him, or which must be adapted to new conditions of construction and use. He must quickly summon all his forces, and work at high speed to produce within a few weeks

an attractive competitive design. In all intellectual callings there are periods of intense labor to prepare for a crisis. For all such work the university examinations provide appropriate and invaluable training. On this account the disappearance of promotion and graduation examinations from many schools — both elementary and secondary — is greatly to be deplored; the more so because college and university examinations are sure to be lowered in standard when the students who enter the colleges and universities have had no experience in examinations prior to becoming members of their college or university on certificates from the secondary schools. A generation is growing up in many parts of the country which has successfully avoided examinations, having acquired the belief that examinations are an evil, instead of a profitable means of sound training.

A peculiar form of examination which has been developed in some university departments deserves mention. When an examination is to be held on a half-year's course in the differen-

tial calculus, for example, instead of preparing a question-paper containing eight or ten questions, the instructor responsible for the course prepares a set of forty or fifty questions which really cover the field of instruction in that course, so that any one who could answer all the questions would demonstrate that he had possessed himself of the substance of the instruction given during the half-year. This long paper is given to the students three or four weeks before the date of the examination. On the examination day the class is told to answer six or eight of the questions on the list. This method is analogous to the use of a full syllabus to define to a class at the beginning the professor's conception of the subjects he shall cover during the entire course which they are entering on. In any university there will be some departments in which this mode of examination can be occasionally adopted to advantage.

The highest instruction given in the American universities is given in those intimate meetings of small groups of advanced students

with their teachers, which are variously called seminaries, conferences, or research courses. The manner of conducting these meetings varies considerably in different departments. In the mathematical, scientific, historical, and philosophical departments the main object is often to give students opportunities of making acquaintance at first hand with original authorities, and to teach them by great examples the methods of research. The work is then apt to consist of reading typical texts and documents, and the records of epoch-making experiments or inquiries, of short studies on special topics of ancient or modern inquiry, and of comments, discussions, and criticisms by the members of the class. One field of study may be chosen by the teacher for the whole group, or a special topic may be assigned to each individual student. While the main purpose of such work is to gain familiarity with the processes of investigation and with the weighing of evidence, the incidental knowledge acquired is an important part of the total result. In seminaries or conferences on

natural history subjects, the critical examination of specimens may find a place, and particularly the study of materials which the students have collected in the field. In economics the instructors undertake the guidance of students in independent investigations of financial, industrial, and transportation problems; and the seminary gives opportunity for the presentation and discussion of the results of the students' researches. In languages and literature the seminary courses generally have two purposes in view. First, to make a thorough study of selected works with special reference to text criticism, etymology, and the history of grammatical forms. Secondly, to acquaint the student with the methods of linguistic and literary research by means of limited original investigations carried on by him under the supervision of the teacher.

The members of any seminary may follow special lines of inquiry, pursue their own work, and confer individually at stated times with the instructors under whose guidance they are conducting their researches; but the seminary

or conference also gives opportunity to the instructor to present results of his own work to the advanced students in his subject. A teacher who is developing a given subject for his own purposes may often get valuable aid from his seminary students, partly in collecting materials, partly in verifying facts or citations, and partly through student discussion and criticism of his own processes and statements.

In some departments, meetings, called conferences, of all the instructors and advanced students are held statedly to promote independent research and close intercourse between instructors and students, and to hear and discuss papers prepared by the student members. This conference method of instruction has been usually developed in the graduate schools of arts and sciences; but it is now used in various university departments, undergraduate as well as graduate. It is the climax of university teaching.

One excellent result of the changes in university teaching during the past fifty years is

that the amount of direct intercourse between teacher and student has greatly increased, so that the personal influence of teacher on student has been much enhanced.

VI

SOCIAL ORGANIZATION — THE PRESIDENT — GENERAL ADMINISTRATION

The American colleges and universities, with a few exceptions in peculiar communities, contain representatives of all grades of American society, namely, some small number of rich men's sons, a much larger number of young men whose families can help but little, or not at all, towards their education, and a strong majority of students whose families are neither rich nor poor. In any college or university the rich class will be represented to a higher percentage than in society at large; because most men who succeed greatly in business, or in the professions, endeavor to get their sons into college, knowing that the only way to maintain through several generations a good family position once won is through superior education. In the large proportion of poor young men in any college there will be a consid-

erable number of youths who have distanced the mass of their contemporaries and associates because of some unusual mental gift, or of some bodily excellence which has enabled them to bear an unusual amount of work, as, for example, the work of earning their living while pursuing strenuous studies. There will naturally be a larger percentage of idlers among the rich students than in either of the other groups, because the rich lack the motive of impending need; but nevertheless, many of the richer students will be found in the upper quarter of their respective classes. In Harvard College, for example, there are both honorary and stipend scholarships, an honorary scholarship being conferred on every student, having no need of pecuniary aid, who stands as high as, or higher than, the lowest scholar in his class who receives a stipend scholarship. Now, in almost all the classes in Harvard College there are as many honorary scholarship-holders as there are stipend scholarship-holders; indeed, there are often more honorary than stipend scholarship-holders. The

poor students are as a rule steady workers. They bring that quality with them to college; for without it they could not have reached the college. In the great majority of students who are neither rich nor poor, every variety of disposition and capacity appears; and it is they who in the long run determine the social quality of a college, for their manners and customs and their common sentiments naturally prevail, although modified somewhat by the manners and sentiments of the richer students on the one hand and of the poorer on the other.

When a college or university is started early in a new or pioneer community, its students may for a time reproduce the homogeneousness of the surrounding community as regards occupation, education, and habitual family life; but even a single generation may suffice to introduce into that college the heterogeneousness above described.

It is of course highly desirable that students of all sorts mix together freely, and come to understand each other during the

period of college life. What are the means of promoting this desirable mixing? In the first place, college halls of chambers, in which students can live in large bodies under healthy conditions and in close association. It is more desirable that each dormitory contain rooms of different sorts at different prices, than that one dormitory should have rooms at high rents, and another rooms at low rents; and it is also much more desirable that each dormitory should contain students of different ages than that Seniors should be massed in one dormitory, and Freshmen in another. The managers of dormitories should always seek to promote the association of students of different college standing, and of different scales of expenditure. A good invention in college halls of chambers is the common-room, a large apartment or suite of rooms on the lower floor, pleasantly furnished as a common meeting-place for the occupants of the hall.

Under a general régime of liberty for the student, it will ordinarily be found impossible to prevent groupings of students according to

their scales of expenditure; but this tendency should be resisted, so far as it is possible to do so, by the renting arrangements of college dormitories. It is of course impossible to prevent private investors offering students desirable suites of rooms at high prices, and thereby segregating the richer; although such buildings may always be kept under the supervision of college officers resident therein, and in the last resort may be made bad investments by means of restrictive college regulations.

It used to be thought among the governors of some of the newer American universities that students' halls of chambers were natural centres of disorder and turbulence, and therefore were undesirable possessions; but this view has now been generally abandoned, partly because some colleges with dormitories have proved to be habitually quieter and more orderly than some colleges without dormitories, and partly because experience has shown that well-managed dormitories make college life more enjoyable and more profitable. Moreover,

it has now been generally recognized that wherever women go to college, well-constructed halls of chambers are well-nigh indispensable for them.

Another means of promoting the desirable association of students whose families live on different scales is the provision of large dining-halls which can be carried on in a coöperative fashion by associations of students. In this way a thousand or more students can habitually eat together, at a moderate general charge, each individual having the liberty of adding to the common diet special articles which he orders and pays for individually. In such halls some tables may be set apart for groups of acquaintances, while others are used as in a restaurant. Both dormitories and dining-halls, if well managed, will keep down the average price of board and lodging in the town where the college or university is situated, and thereby tend to promote the growth of the college, and to maintain its democratic quality.

The mixing of all sorts of students may

further be promoted by providing large club-houses for the use of the whole body of students. A club which contains no more than five hundred members is highly useful in this respect; but a club like the Harvard Union, which contains fifteen hundred active members, is of course much better; indeed, such a club is a very efficient means of promoting an advantageous breadth and variety of acquaintance among students. Inasmuch as such a club must inevitably have a low annual fee, it cannot be supported without endowment, such as the gift of its building, or the provision of a fund the income of which helps to pay the running expenses.

In any old and large university there will be found numerous associations of students whose membership is determined by some common taste or capacity, such, for instance, as musical associations, dramatic clubs, and societies which meet statedly to discuss a subject of common interest, — like the natural history societies, and the clubs containing the students who are interested in philosophy,

economics, history, government, law, or medicine. These groups are made up without the slightest reference to the social standing or mode of life of their members, membership being conditioned solely on capacity and desire to contribute to the object of the association. These associations often establish among their members lifelong intimacies based on intellectual affinities.

The absence, or inadequate supply, of dormitories in some American colleges and universities has given opportunity for the introduction and successful development of the fraternity system. The fraternities, with their large and comfortable houses, and their interesting secrecies, good libraries, and pleasant relations with graduate members, organize a part of the students of a college or university into a number of fixed groups, the new members of each group being ordinarily selected within a few weeks of the advent of a Freshman class, if, indeed, not earlier pledged. In a small college the fraternities may each year divide among themselves almost the entire

body of newcomers, leaving but a small remnant invited into no fraternity, who are usually regarded as unfortunates. The fraternity groups thus hastily formed persist throughout the whole college course, and, indeed, last in some measure throughout life; so that when a graduate returns at Commencement time, he revisits his fraternity quite as much as his college.

In large universities, where fraternity influence is comparatively feeble, other means have been found of gratifying the desire to meet frequently, or even live with, a small group of congenial individuals, whose habits of expenditure are approximately on a level. The small clubs, so called, gratify this propensity. Twenty to forty men associate themselves together, and maintain a house, or some rooms, to which they habitually resort for social intercourse. These clubs, like the fraternities, are often helped pecuniarily by former members, who remember gratefully the pleasure their club gave them in their own college days. These clubs are ordinarily conducted

with much privacy; so that some of them may occasionally become centres of luxurious, or even vicious, living, without this perversion coming to the knowledge either of the college authorities, or of the main body of the students. Such lapses are, however, only occasional, and are usually corrected either by graduate members, or by new members who replace the men who have led the club astray. The small social clubs generally illustrate the principle that "birds of a feather flock together," — a principle which obtains in all human as well as bird society, and which democracy cannot eradicate, and need not wish to.

Sororities have, in general, the same merits and advantages as fraternities, but being of more recent origin and serving the sex which does not, as a rule, make and accumulate money, they have difficulty in procuring endowment or adequate revenues. They add to the social enjoyments of their members, and give them a sense of mutual support and of good fellowship. They are especially useful in co-educational institutions which do not

possess an adequate number of dormitories for women.

The fraternities and sororities and the social clubs in American colleges and universities, being small, exclusive, and secretive groups, seem inconsistent with democratic principles in general, and particularly with the liberal spirit of a society of scholars. The fact is, however, that the natural human being wants and needs for social purposes some group or groups larger and more various than the family, but much smaller and less various than the entire community, or even than the entire membership of a society of scholars. For social purposes democracy is too near an approach to infinity. The limited human being, even when fairly educated, craves a limited group of congenial associates having some common interest, which, for the purposes of a social bond, may as well be narrow as broad.

Fraternities and clubs alike can be utilized by sympathetic and respected college officers in confidential ways to support good order, to root out evil practices, and to control and

reform young men who have shown dangerous tendencies. Public misconduct on the part of any of its members is held to discredit a fraternity or club; so that the officers and past members of any respectable fraternity or club will labor diligently with erring members, and at the instance of college officers will take a great deal of trouble to protect a weak brother against himself, and to prevent him from injuring the reputation of the society to which he belongs. Fraternity or club companions can often exert more influence and a more constant influence on young men who are going wrong than any college officers can exert directly. It is essential to this good influence that it be private and unofficial so far as the college is concerned.

The phrase college spirit undoubtedly describes a real thing, but this spirit is, on the whole, much the same in all the American colleges and universities which are old enough to have traditions and inheritances, variety of spirit existing in them only in comparatively small proportion. Nevertheless, slight differ-

ences in tone or atmosphere may produce striking effects on the prevailing quality of the graduates of different colleges, and these effects are often traceable to differences in social organization,—the complex result of traditions, manners and customs, and transmitted opinions and sentiments. Even real differences of policy may mean only choices of different means towards a common end. Thus, a real difference among colleges is the difference in the degree of freedom permitted to the individual, and in the importance attached to the development of individual mental and moral power. Some institutions think first of developing individual initiative through freedom of the will, and through offering to each individual all the best means of developing his own personal faculty; but they prefer this course because they believe that is the way to promote freedom, efficiency, and happiness for the mass of mankind. By working primarily for the individual, they think they best promote the interests of the mass. Such institutions naturally desire to serve

all professions, elevate all occupations, train leaders of thought, and equip good administrators or managers for industries which direct the physical and moral capacities of hundreds of thousands of people. They believe that effective leaders can be produced only in freedom, and through the most assiduous attention of teachers and governors to individual capacity and promise; but the benefit of the led is the ultimate object of training leaders. Other institutions believe more in prescription, an average product, a gregarious enthusiasm, and a unanimous motive. They believe that studies should be accessible only in groups made up by educational sages, and that sports are meritorious in proportion to the amount of team-play which they develop. They believe in collective wisdom, in cheering sections, and consentient multitudes. These differences, however, are after all relatively superficial. At bottom most of the American institutions of the higher education are filled with the modern democratic spirit of serviceableness. Teachers and students alike are profoundly moved

by the desire to serve the democratic community, to strengthen and maintain free institutions, and to prove that in time free institutions will bring forth in abundance all the best fruits of liberal culture, such as artists, scholars, musicians, poets, and investigators, great judges, statesmen, and public servants, as well as honorable practitioners in all the learned and scientific professions. All the colleges boast of the serviceable men they have trained, and regard the serviceable patriot as their ideal product. This is a thoroughly democratic conception of their function.

We pass now to a consideration of the administrative offices of a university, and take up first the office of president.

The president of a university is in the first place its chief executive officer; but he should also be its leader and seer. In order to give the competent man every opportunity to exercise the functions of a leader and inspirer, he should be the presiding officer of the trustees, or other property-holding and controlling

board, a member ex-officio of any supervising board which the constitution of the university may provide, and the presiding officer of every faculty within the university. There are American universities in which the president is not by right a full member of the board of trustees; but this is an unfortunate arrangement which diminishes to a serious degree the president's authority and influence.

Fifty years ago, it was not unusual for the president of a so-called university to restrict his interests and his functions to the college or academic department, and to take no part in the administration or conduct of the professional schools. This day, however, has gone by; and every university president worthy of the name now finds opportunities for usefulness in all the professional departments. He is able to carry the results of experience in one faculty to all the other faculties, and to contribute to the proper coördination of the work of one faculty with that of another, or of all the others.

In the board of trustees and in all the fac-

ulties the president should invariably name all committees, never allowing this important function to be usurped by any private member of these boards. If he uses this power with fairness and discretion, he will obtain in the standing committees excellent bodies for selecting and formulating those progressive ideas or projects which have a chance of commending themselves to the governing boards; and membership in such committees will be the means of interesting the most serviceable men in feasible improvements of policy and practice. The selection of members of special committees on measures of current interest is also an important function of the president, which calls for good judgment on his part in regard to both men and measures. Indeed, the selective discretion of the president in such matters will, in the long run, go far to determine his success or non-success in a large and well-established university, the government of which is neither autocratic nor democratic, but constitutional.

The relation of the president to the finances of a university is different in different States

of the Union, and in State universities as distinguished from endowed and tuition-fee universities. In a State university the president needs the capacity to present persuasively and vigorously to a legislature the case of the university as an institution which repays manyfold, and with extraordinary promptness, every appropriation which the legislature makes for it, especially when the appropriations are liberal. To such ends the president of a State university ought to know how to use the public press, the granges, the popular lecture, and the teachers' institutes as means of awakening and diffusing popular interest in the university as a whole. With the help of the most far-sighted deans and professors in the several departments, the president of a State university ought to prepare to meet future needs of the population which the university chiefly serves, and to meet every appropriate demand for the services of the university as soon as the demand is appreciable. Every new service, or demand for service, should be made the ground of an application to the legislature

for additional resources. The president should seize every opportunity to give a demonstration that the university has made a direct contribution to the welfare of the State, the prosperity of its industries or manufactures, the success of its schools, or the influence of the learned and scientific professions within its borders. He must know how to appeal to State pride, in order to increase the resources of his university.

The president of an endowed university is rarely called upon to guide the thoughts or influence the action of legislative bodies. Occasionally he may have to defend the exemption of educational institutions from taxation, or to support projects for the improvement of public secondary schools, or of normal schools; but in general his methods of adding to the resources of his university are different from those of the president of a tax-supported university.

The head of a denominational institution of learning must necessarily appeal to denominational zeal in general, and in particular to

the denominational organizations which maintain interest in the educational institutions of their denomination, and provide a large part of their resources. In an institution which has no denominational affiliations, the president will be exempt from the necessity of keeping such affiliations close and warm, but of course cannot draw upon any denominational treasuries.

The popular imagination attributes to the presidents of endowed universities a habit of soliciting contributions from very rich men, rich childless men, and sick rich men and women; and the correspondence of rich men would doubtless supply evidence that some presidents of endowed institutions make such applications. There are also cases in which prosperous business men who, as presidents of endowed universities, become greatly interested in the success of their institutions, ask their prosperous business friends and associates to join them in making up an annual deficit, erecting a new building, or completing a new endowment. In the older and richer

universities, which have the steady support of a large body of grateful Alumni, the president need not engage in personal solicitation of gifts to his university. There are more effective methods in use, to which the president should contribute to the best of his ability. Thus, he should secure complete publicity in regard to the financial situation of his university; its annual receipts and expenditures, the gifts annually received, — whether for funding or for immediate use, — and its most pressing pecuniary needs, should all be published. Secondly, publicity should be given to the fact that the university scrupulously respects in theory and in practice the wishes of all givers, and makes the beneficent action of every endowment perpetual, so far as human prudence and fidelity can go. Thirdly, the president should see to it that all the income of the university is used appropriately and frugally, so that there shall be no misdirected expenditure and no waste. Any competent president will be watchful against the increase of administrative and equipment ex-

penditures at the expense of salaries for teachers, — that is, he will be on his guard against mounting expenditures for management and materials as against expenditures for direct teaching.

Finally, the president of an endowed university, thinking to increase its resources, will try to let the educated public know what the product of his university is in trained men able to render conspicuous service as authors, men of science, members of the learned and scientific professions, bankers, managers of corporations, and public servants. This product will be independent of State limits, and, indeed, of national boundaries. Realization of the service a strong university renders to the country, and to mankind, is the great inducement to educational benefactions; and it is therefore an important function of the president of any endowed institution to see that the means and opportunities of that realization are supplied.

In any university, State or endowed, the president's most constant duty is that of su-

pervision. The statutory definition of his functions should leave no doubt as to the universality and comprehensiveness of his supervision. In this regard it would be difficult to improve on the Harvard statute on the president which prescribes, near the end of the statute, that it is the duty of the president — "to direct the official correspondence of the University; to acquaint himself with the state, interests, and wants of the whole institution, and to exercise a general superintendence over all its concerns." Under that statute no question ever arises whether it is the business of the president to do this or that, or to concern himself with this or that part or aspect of the university.

The president's judgment should be brought to bear on every question of promotion within the permanent staff, and on every selection for an appointment without limit of time, or for a long term. He should of course consult the most appropriate advisers within and without the university on every appointment; but his own mind should be brought to bear

on every important selection. The president who delegates these selections, or takes little interest in them, is in all probability neglecting the greater for some lesser function. He is spending his strength on less important matters, and neglecting the duty on the right discharge of which the future of the university chiefly depends.

Presiding at all faculty meetings is an important part of the duty of the president of a well-governed university, whether tax-supported or endowed. He there has opportunity to learn the personal qualities of many members of each faculty, and to estimate their judgment and their public spirit. He also has opportunity to form his own opinions as to the feasibility of desirable changes, and as to the means of advancing projects which are promising but not yet ripe. He should be better acquainted than most members of any faculty with the prevailing discussions on education, sociology, and legislation, and should be able to give the faculties the benefits of his observations outside the university world.

He needs thorough acquaintance with the schools which underlie the colleges and universities, with the changing conditions of the professions which the university feeds, and with the alterations in the national industries and habits which cause, or should cause, the rise of new professions.

The president of a university should never exercise an autocratic or one-man power. He should be often an inventing and animating force, and often a leader; but not a ruler or autocrat. His success will be due more to powers of exposition and persuasion combined with persistent industry, than to any force of will or habit of command. Indeed, one-man power is always objectionable in a university, whether lodged in president, secretary of the trustees, dean, or head of department. In order to make progress of a durable sort, the president will have to possess his soul in patience; and on that account a long tenure will be an advantage to him and to the university he serves.

Inasmuch as it is the object of the university

to send out into the multifarious occupations of civilized society a steady stream of well-trained young men who mean to make themselves useful, it is well for the president of the university to make himself useful in some field of public service, without as well as within the university. He will thus set an example which will be more influential than personal exhortation with the youth who pass within the range of his influence.

Thirty-nine years ago, a young man who had been president of a university for five months made at his inauguration the following remarks, among others, about the quality and function of a president: —

"The President should be able to discern the practical essence of complicated and long-drawn discussions. He must often pick out that promising part of theory which ought to be tested by experiment, and must decide how many of things desirable are also attainable, and what one of many projects is ripest for execution. He must watch and look before: watch, to seize opportunities to get money, to

secure eminent teachers and scholars, and to influence public opinion toward the advancement of learning; and look before, to anticipate the due effect on the University of the fluctuations of public opinion on educational problems, of the progress of the institutions which feed the University, of the changing conditions of the professions which the University supplies, of the rise of new professions, of the gradual alteration of social and religious habits in the community. The University must accommodate itself promptly to significant changes in the character of the people for whom it exists. The institutions of higher education in any nation are always a faithful mirror in which are sharply reflected the national history and character. In this mobile nation the action and reaction between the University and society at large are more sensitive and rapid than in stiffer communities. The President, therefore, must not need to see a house built before he can comprehend the plan of it. He can profit by a wide intercourse with all sorts of men, and by every

real discussion on education, legislation, and sociology."

After thirty-nine years of experience in the same office he finds the above description correct.

A fully organized university contains an undergraduate and a graduate department of arts and sciences, and four or more professional schools; and in many universities each of the two departments in arts and sciences is divided into two parts, — one of arts and pure sciences, and the other of applied science. At the head of each department a dean is ordinarily placed, who is its chief administrative officer. In most cases he is also a professor and an active teacher, who gives part of his time to administrative work. The office is comparatively new in American universities. Forty years ago, there was only one dean in Harvard University, — the dean of the medical faculty. There are now four deans connected with the Harvard faculty of arts and sciences, and five other deans in the professional schools of the University; and similar administrative

dispositions are made by many American universities.

The functions of a dean relate almost exclusively to his own department of the university; but within that department they are comprehensive. He is the chief adviser of the president concerning the instruction given in his school, and is responsible for the preparation and orderly conduct of its faculty business, and for the discipline of its students. In the undergraduate departments much of his time is given to intercourse with students who need advice or pecuniary aid, or who neglect their opportunities, or become dangerous to their associates. For the younger professors and inexperienced teachers in his department, the dean is a counsellor and friend. In most universities deans are selected from among the members of the faculty, and they hold office without limit of time. They may best be persons who are capable of working cordially with the president, although their functions are in many respects independent of him. Much of the work of a dean is done in con-

formity with rules laid down by a faculty, or with well-understood, predetermined policies of the university, and it is only on matters for the settlement of which he finds no such guidance, or on new pecuniary problems, or on difficult cases, that a dean will ordinarily consult the president.

It is obvious that for the discharge of these functions a dean needs good judgment, quick insight, patience, and a strong liking for helpful, sympathetic intercourse with young men. The men who are most successful in the work of a dean are neither dry nor gushing, neither rude nor soft; they are alert, attentive, sympathetic, and hopeful. In conducting the business of his office a dean needs the usual qualities of a good administrative officer, namely, thoroughness in inquiry, promptness and clearness in decision, and assiduity. In manner and address he ought to be frank, considerate, and cordial. He ought to inspire confidence and win regard, and be capable of exerting a good influence without visible effort, and without self-consciousness.

In a large department, containing many students, the work of a dean makes a serious demand upon a conscientious man whose feelings are quick; so that deans are often compelled to retire from service in consequence of the incessant drain on their sympathies, and the exhausting nature of parts of their work. One of the most trying parts is the intercourse with anxious, dissatisfied, or unintelligent parents. On the other hand, there is no part of university work which brings to the faithful worker a stronger sense of being useful, or more durable satisfactions. His personal contacts with young men are numerous and intimate. He often knows that he has done good to people in anxiety or trouble, and as the years go by he experiences many of the legitimate rewards of bringing help at critical moments in other people's lives.

It is generally a dean that in the course of years brings to pass real improvements in college manners and customs through personal influence on successive generations of students. To produce such effects he needs a

good many years of continuous service, during which his ameliorating influence gradually takes effect on the young men in his charge. That institution is fortunate which can command the services of the right kind of men in its deanships; and the president of a university has no more important duty than that of nominating with all possible care the deans of the several departments.

The president and the deans alike need assistance which is by no means of a clerical nature, and hence in a large university there will be a considerable number of graduates of the institution who serve as secretaries, and are charged with administrative work which requires acquaintance with the university and with its teachers, officers, societies, clubs, and coöperative organizations. Each governing board and each faculty has its secretary, and in a large institution the president may have in his office two or three highly educated men who conduct the larger part of his correspondence, prepare his business for the board of trustees, communicate with persons who

have business with him and make appointments for them, collect information, and look after the official publications of the university. These duties are often of a confidential character, requiring discretion and quickness in action, and a robust loyalty to the institution. The dean of a large department requires also a good deal of clerical assistance; because the records of the students under his charge as regards their attendance, and the grades which they attain at examinations or for written work, must be kept with accuracy. The students' records kept in a dean's office are not only indispensable while the students are members of the university, but are also in many cases useful in after years; although the record of each individual is held to be confidential, there are many proper uses to which they can be put by request of relatives, friends, or biographers.

The function of the secretary of a faculty is by no means unimportant. The history of a university may best be read in the records of its board of trustees and its faculties; for the

main steps of its progress are there recorded. The secretary of a faculty, like an administration secretary, needs a capacity to grasp quickly the thoughts of other people and reduce them to clear and precise written form. A secretary who can pick the kernel out of a good deal of discursive chaff, or express concisely the result of an involved debate, will be likely to make himself very useful. If he can do those things, and is fair and diligent, he may be a quiet man of infrequent speech, and yet have a strong influence for good. If he possesses also some gift of speech and some charm of style, and a strong memory, his serviceableness will be greatly enhanced.

Every vigorous university issues in these days a large number of periodical publications, including catalogues, reports, and announcements, and also a considerable number of literary and scientific publications such as annals or memoirs of observatories and museums, theses or essays produced by the teachers and graduate students of the university,

contributions from the various laboratories, syllabuses of lectures and laboratory courses, so-called studies in classics, history, and economics, and collections of examination papers. These various publications are issued in a steady stream throughout the year, and a competent agent must be employed to superintend the work of printing and issuing them. This work needs to be done with accuracy and efficiency; it affects every teacher and student in the university, and many of its future members. Since all the strong American universities have undertaken a great deal of new work within the last twenty years, it is necessary to bring this new work to the knowledge of graduates, teachers, parents, and pupils at school. The distribution of this information must be as wide as the country; for the stronger universities are now resorted to from many parts of the United States, or indeed, from all parts.

In years still recent, several American universities have adopted a piece of administrative work which Harvard University, first among American institutions, copied in part

from Oxford University, namely, an office through which members of the university, who need to support themselves wholly or in part, may obtain appropriate employment, and graduates of the university ready for service may obtain employment appropriate to the education they have received. In England the work of a university appointments bureau is chiefly devoted to procuring places for young graduates as teachers, civil servants, journalists, secretaries, or corporation officers; but in America a wider range of employment for graduates has been sought. At Oxford and Cambridge, again, there are very few undergraduates who need to earn their living while in college; whereas in American universities a considerable proportion of all the undergraduates must be self-supporting, or must earn a part of their expenses. In the larger American universities the work of the secretary for appointments is growing, and likely to grow, as the managers of large producing or distributing industries realize more and more the value of highly trained young men, and the

extreme difficulty, in these days of applied science and minute division of labor, of bringing up competent managers from the ranks.

In a university in which are maintained dormitories, dining-halls, and a coöperative society for supplying the articles which students inevitably need, — such as clothing, books, stationery, furniture, athletic supplies, instruments, and sporting goods, — two or three administrative officers, presumably connected with the treasurer's department, must give attention to these matters, and particularly must assist the students in their conduct of coöperative undertakings, like dining-halls and coöperative stores. Their work will be partly administrative and partly accounting.

The directors of laboratories, libraries, and museums have an important part in the administrative work of a modern university. In their accounting they need assistance from the treasury department. Each director of a laboratory, library, or scientific establishment can employ to advantage one or more assistants in the routine business of the establishment; but

he ought to possess himself the usual administrative faculties. Every laboratory, observatory, or museum is in some sense a workshop, and the head of it ought to know how to conduct a workshop in an orderly, economical, and efficient way. Inasmuch as students are to be trained in laboratory work to the careful and precise use of their senses, and to the procuring of the most favorable conditions for every experiment, every laboratory should be tidy and clean. Every library and museum should exhibit the most careful housekeeping, being kept as free as possible from dust, insects, crumbs, and accumulations of rubbish, not only in the show-rooms, but in the work-rooms and the receiving-rooms. Librarians and museum directors should keep clearly in mind definite policies concerning the relation of the bulk of their collections to their working-rooms, their exhibition-rooms, and their spaces for storage. The collecting forces of a library or scientific establishment are apt to outrun the spaces for exhibition and the resources for utilization. In such cases the director may be

working for some future generation, or availing himself of fleeting opportunities for collecting; but he is not doing his best for the passing generation. In a university intended for the instruction of each generation as it passes, there are limits to the accumulation of material which soon loses its interest for living men and passes into the domain of history. Collections of hand and machine tools and of machinery, which for a few years may have illustrated actual industries, soon lose all interest except for students of the history of the trades to which they belong; yet they occupy much space, and must be maintained in fair condition. Thousands of books in every generation fall into a similar category. They have been replaced by better books, and have no interest except for students of the history of an art or an idea.

A university which proposes to be an effective teaching implement for each new generation must be careful how it undertakes to maintain great museums in many fields of knowledge. It should prefer museums of mod-

erate size which contain only a few specimens of each type, and those often replaced. Its collections should be always thought of as teaching materials, partly for elementary students, partly for advanced students, and partly for the public at large. The buildings should not be conceived of as indefinitely extensible; but as having fixed limits, the contents to be made choicer and more instructive by exclusion and selection in each succeeding generation.

This rule must be applied to books, if a library is to be kept an effective treasure-house for living men. The directors of collections, whether of books, specimens, or records, need to study constantly the relative expenditures for collecting and for utilization. Utilization should keep up with collection; and due proportion should be observed between the cost of collection and the cost of utilization, else the passing generation will not get its share of the fruition. There is also danger that if utilization lags behind collection, much of the cost of collecting will be lost.

Any one who makes himself familiar with all the branches of university administration in its numerous departments of teaching, in its financial and maintenance departments, its museums, laboratories, and libraries, in its extensive grounds and numerous buildings for very various purposes, and in its social organization, will realize that the institution is properly named the university. It touches all human interests, is concerned with the past, the present, and the future, ranges through the whole history of letters, sciences, arts, and professions, and aspires to teach all systematized knowledge. More and more, as time goes on, and individual and social wealth accumulates, it will find itself realizing its ideal of yesterday, though still pursuing eagerly its ideal for to-morrow.

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